THE CHALLENGE WITHIN: DIVERSITY TRAINING IN TEACHER EDUCATION

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by Heather Lynn Ludwig
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An Abstract of a Dissertation by
Heather Lynn Ludwig
October 2006
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The Problem: Because the population of the United States continues to change, and schools must adjust to meet the challenge of educating a diverse body of students, Teacher Education Programs must look within to identify what characteristics of difference are addressed and how they are addressed to prepare pre-service teachers.

Procedure A survey was electronically emailed to 50 teacher education faculty from three Midwestern Institutions. Frequency counts and percentage data was used to analyze the faculty sample and the instructional strategies used to address characteristics of difference. A Chi Square Goodness of Fit Test was utilized to analyze what instructional methods were used for each the characteristics of difference. Qualitative analysis of data was utilized to clarify and add depth to the findings of the study.

Findings: The teacher education faculty who responded to the survey are addressing many characteristics of difference. The number of faculty from individual programs would also indicate that characteristics of difference are not limited to only one diversity course in those programs. The majority of the Teacher Education Faculty when addressing characteristics of difference avoided instructional strategies that were student-focused, but reported teacher-led, "tell and talk" instructional strategies most often.

Recommendation: Additional research is needed to identify specific strategies and activities for each of the characteristics of difference. Encouraging faculty to be reflective about their own worldview and how this impacts the classroom, to participate in professional development opportunities and to work as a team to establish what characteristics of difference are actually being addressed will increase diversity awareness and strengthen the teacher education program. Pre-service teachers should have more field experience that includes exposure to and interaction with diverse populations. Change occurs when pre-service teachers have experiences with diversity and the opportunity to reflect about values, beliefs, and their own personal experiences with the characteristics of difference.

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"The more intensely we feel about an idea or a goal, the more assuredly the idea, buried deep in our subconscious, will direct us along the path to its fulfillment."

—Earl Nightingale

Earning a doctoral degree is an intense goal that has been buried in my mind for many years, and I knew it would come to fruition in time. It is a dream of great passion for me, an aspiration that finally came to the surface and drove me toward its completion. I put my life on hold in many ways to complete the degree, and as I have grown personally and professionally, I must acknowledge those who sacrificed their own time and energy to help me realize my dream. My sincere thanks goes to the following people:

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Chapter 1

INTRODUCTION

In today's world, it is critical to provide teachers with the diversity skills and attitudes that will allow all students to grow as well as to learn. Educators must be able to relate and teach a wide range of individuals so that in both the ideal and real classroom no child is left behind. Without diversity training, however, most teachers teach the way they were taught and relate best to individuals similar to themselves. Yet, public school environments today seldom reflect a uniform white, middle-class, comfortable America. While 40% of 4th graders are eligible for free and reduced lunches (National Center for Education Statistics, 2003a), 42% were part of a racial or ethnic minority group in 1999, up from 22% in 1972 (National Center for Education Statistics, 2003b). In addition, Marks and Smrekar (2003) state that the number of students of color "is rising with 34% in 1994 and will reach 40% or more by 2010" (p. 4). Diversity education is, therefore, a critical challenge that must be met within teacher education programs.

But, if teachers are going to be educated and trained to address diversity issues, professionals need to define and agree on what needs to be addressed. For example Burden et al. (2004) reports, "we use the term diversity with an evolving and expansive meaning of differences associated with diversities of

gender, ethnicity, national origin, social status, religion, age, ability and disability status, personality, sexual orientation and so on (DeSensi, 1995; Hodge, 2003)" (p. 178). This simple listing of categories of difference is expanded by the University of Oregon's (2005) published definition:

> The concept of diversity encompasses acceptance and respect. It means understanding that each individual is unique, and recognizing our individual differences. These can be along the dimensions of race, ethnicity, gender, sexual orientation, socio-economic status, age, physical abilities, religious beliefs, political beliefs, or other ideologies. It is the exploration of these differences in a safe, positive, and nurturing environment. It is about understanding each other and moving beyond simple tolerance to embracing and celebrating the rich dimensions of diversity contained within each individual (para 1).

Obviously, diversity is a broad term that encompasses specific elements that vary from institution to institution and person to person. Iowa State University (2005) defines diversity as a relational construct:

> Diversity is therefore, knowing how to relate to those qualities and conditions that are different from our own and outside the groups to which we belong, yet are present in other individuals and groups. These include but are not limited to age, ethnicity, class, gender, physical abilities/qualities, race, sexual orientation, as well as religious status, gender expression, educational background, geographical location,

> income, marital status, parental status, and work experiences. Finally, we acknowledge that categories of difference are not always fixed but also can be fluid, we respect individual rights to self-identification, and we recognize that no one culture is intrinsically superior to another (website).

Another definition of diversity offered by Koppelman (2005) is " the presence of human beings with perceived or actual differences based on a variety of human characteristics"(p. 335). Rice (2003) characterizes diversity as "a broad range of differences among students, including race, gender, sex, age, ethnicity, physical abilities, mental abilities, sexual orientation, education, social class, language, and so on" (p. 21). Sheets (2005) refers to diversity as the coming from a different background as defined below:

> dissimilarities in traits, qualities, characteristics, beliefs, values, and mannerisms present in self and others. It is displayed through (a) predetermined factors such as race, ethnicity, gender, age, ability, national origin, and sexual orientation; and (b) changeable features, such as citizenship, worldviews, language schooling, religious beliefs, marital, parental, and socioeconomic status, and work experience (p. 15).

For the purpose of this research study, diversity will be defined as characteristics of differences that are used to classify individuals: race, ethnicity, gender, sex, age, physical abilities, mental abilities, sexual orientation, parent's education level, language, religion, and socio-economic status that define the individual.

Race and ethnicity are two elements of characteristics of difference that are usually combined into a single area, but this grouping is often not appropriate. Race is defined as "a social or cultural concept rather than an inherent, observable characteristic, for all races are simply variations of a single human species of common prehistoric ancestry" (Adams et al., 2000, p. 23). While ethnicity is defined as "one that is socially distinguishable from other groups, [ethnicity] has developed its own subculture – which can include nationality, religion, and language" (Adams et al., 2000, p. 23). The distinct differences between race and ethnicity are crucial to the understanding and encouragement that students need to succeed in a classroom. Within these differences, there are multiple factors that can socially distinguish and separate. According to National Collaborative on Diversity in the Teaching Force, in the 2001-2002 school year in the United States, 60% of students were White, 17% were Black, 17% Hispanic, 4% Asian/Pacific Island, and 1 % American Indian/Alaska Native. However, to say that 60% of students are White ignores the important ethnic differences in background experiences, language use, symbols, and culture.

Understanding ethnicity elements allows teachers to be aware and supportive of cultural differences. For example, Shinagawa (2005) establishes that even though Asian students have the tendency to be seen as high academic success stories, the high school drop out rate is still 20%. Without understanding the cultural and family backgrounds, teachers unknowingly pass their own values

and ethics onto their students. Students are then placed in conflict with their cultural values.

Although race and ethnicity are clearly markers of diversity, teachers must not forget about stereotypes associated with gender and sex. Gender identity "refers to one's psychological sense of oneself as a male or female" (Adams et al., 1997, p. 115), while gender role means "the socially constructed and culturally specific behavior and expectations for women (femininity) and men (masculinity)" (Adams, et al, 1997, p. 115). Sex, on the other hand, is defined as biological differences between male and female. For example, some educators believe that women and girls cannot succeed at the highest levels of math and science because of a social stereotype assigned to their gender. The former president of Harvard, Lawrence H. Summers, reflected his own acceptance of this stereotype when he stated, "biological differences account for the relatively small number of women among the world's senior scientists and mathematicians" (para 1). If teachers discourage girls from taking on the challenge of these subjects because of mistaken beliefs assigned to social roles, girls may not fully develop their mathematical and scientific abilities. On the other hand, research by Watiuk (2001) establishes that "biologically" boys have a tendency to learn to read at a later age then girls because "girls tune in to language a little sooner and perhaps a little better at first than boys." Without this knowledge, a teacher may not give males proper guidance and place them into special education where they will most likely stay throughout their educational life.

In today's educational philosophy of grouping by abilities, another issue arises because of the diversity of different ages in one classroom. Each age has social and behavioral needs that are often not met. With academic acceleration, middle school students are integrated with high school students, but high school teachers have behavior expectations that are not always ideal for the younger students. Shields (2002) relates that high school teachers require larger projects that involve longer time on task then middle school students are capable of completing. These students often become frustrated within the educational environment and are unable to academically achieve as high as expected for them.

Physical abilities also influence classroom environment where students must feel welcome and accepted in order to do their best. When these diverse students cannot maneuver around their room, they may not feel connected to their education. Coster and Haltiwanger (2004) established from their study of sixty-two participants with Individualized Education Plans (IEP) that teachers often are only worried about including physically disabled students in proximity to mainstream students and no social interaction is encouraged between the two groups. Understanding students' individuals needs whether it is hearing or seeing or physical challenges and accommodating these individuals will enable these students to be connected to their learning environment.

In addition to physical diversity, mental abilities can also cause students to become labeled as "egghead" (too smart) or "dumb"(not smart enough).

Although very different in intent, both labels separate students from their peers. For example, students with learning disabilities often are categorized as academically unable to complete the learning. A learning-disabled label affects how teachers interact with students (Valle et al., 2004). Once labeling starts in schools, it travels with students from class to class or grade to grade. Socially, students with mental disabilities may find integration into a regular classroom as necessary but feel as if they do not have enough support academically (Vaughn and Klingner, 1998). Likewise, high achieving students may often not perform up to their potential for the fear of being labeled smart and then not being accepted socially. All students must have the opportunity to try their hardest and succeed no matter their ability. Teachers who have diversity training about accommodating both the physical and mental needs of students can best provide those opportunities.

Sexual orientation is an area that is often forgotten when it comes to characteristics of difference. Most individuals believe that this is a personal or moral issue and does not or should not affect the classroom. In reality, sexual orientation influences students' achievement because 92% of gay students hear homophobic remarks frequently (GLBT, 2006). In addition, 61% of gay students feel attacked daily because of verbal abuse while 34% reported physical harassment (GLBT, 2006). With such high indicators of risks, it is essential to not forget about sexual orientation as an area of diversity that must be addressed when creating a safe environment.

A safe environment must also be provided for students with a wide range of educational levels just as their families and family circumstances influence how they are treated in society. Parental educational background should not influence what educational opportunities that students receive. Yet, it is common for students with parents who have not had a college education not to have the same academic help available at home as students with parents with higher education. This particular difference could affect how a student performs in class. Hill and Taylor (2004) suggest that "a higher education level of parents is positively associated with a greater tendency for them [parents] to advocate for their children's placement in honors courses and actively manage their children's placement" (p. 162). Hill and Taylor (2004) compare this proactive stance with parents of lower-socioeconomic families status who "often have fewer years of education themselves and potentially harbor more negative experiences with schools" (p. 162).

Socio-economic status also has an influence on the development of a student's academic performance. Yet, Adams et al. (1997) states, "The gap between rich and poor in the United States is the greatest it has ever been." Teachers may unknowingly put down a group because of economic status. Davis-Kean (2005) found

> low-income families instead had high expectations and performance beliefs that did not correlate well with their children's actual school performance. Alexander et al. suggested that the parents' abilities to form

> accurate beliefs and expectations regarding their children's performance are essential in structuring the home and educational environment so that they can excel in post schooling endeavors (p. 294).

Without the knowledge that low socioeconomic parents want and expect high academic achievement, some teachers may not push these children to excel.

Other learners who are impacted by a teacher's understanding include English Limited Learners. Students who are English Limited Learners not only have the complication of a language barrier, but also a cultural barrier that they bring to the classroom. Often when an individual has limited English skills, he/she is placed in a separate environment to learn English. Through this experience, an English Limited Learner may feel as if he/she was left out of the academic environment of the rest of the students their age. English Limited Learners students who are socially isolated because of language issue may have a harder time being accepted than English Limited Learner students who are integrated into the academic mainstream. Classroom teachers need to include English Limited Learners effectively into the mainstream classroom instead of seeing them as yet another challenge.

Not only does language become a diversity issue but also religious differences between student and teacher may cause mistrust and a lack of communication. Most history books are written from the privileged Christian perspective, and they evaluate and relate all world events around Christian events (Adams et al., 1997). Students who do not practice Christianity may feel

anger in having only Christian history emphasized or Christian religious holidays and celebrations recognized.

All students must feel as if they are an essential part of the school and that their teachers care for them to experience the "relaxed alertness" that generates success. With such a diverse population, the educational environment must be one in which the students are able to succeed because those individuals around them understand and accept them. Students who feel that the schools do not represent who they are or understand their lives (Brown et al., 2003) do not care if they succeed or not.

Lack of Diversity in Teachers

While public school classrooms are becoming more diverse, the teachers in those classrooms reflect a relatively homogeneous population. According to Cruz and Patterson (2005), in 1999, 87% of elementary and secondary school teachers were Caucasian, female, and from the middle socioeconomic class, while the National Collaborative on Diversity in Teaching Force and National Education Association (NEA) found in 2001, 90% of public teachers were White and only 6% were Black (National Collaborative on Diversity in Teaching Force, 2003c, National Education Association, 2003). In addition, the NEA established in 2003 that 79% of teachers surveyed were female. At the same time, the National Collaborative on Diversity in the Teaching Force found 40% of schools in the United States had no teachers of color, a statistic that is not representative

to the student population. For example, the NCES reports that nationally 40% of students are eligible for free and reduced lunches and 42% of students are part of a minority group (National Center for Educational Statistics, 2003). A possible conflict arises among teachers and students in these classrooms because of the difficulty of understanding and communicating when teacher and students come from different backgrounds.

These difficulties may hinder classroom relationships, and learning may be lost. Humans tend to relate more efficiently to individuals who are similar to them, and educators are certainly human. Teachers need to be aware of cultural diversity and expectations instead of just using their own cultural experiences as the correct reference points for behavior. Beyond cultural awareness, students need to be taught by highly qualified individuals who have knowledge, skills, and dispositions to provide all students with a quality education. Being aware of cultural differences does not always guarantee the knowledge or the will to address these differences. For example, "70% of the teachers with English Limited Learners students in their classroom receive no special training" (Evans et al., 2005, p. 76). This lack of knowledge and skill affects teachers' abilities to interact with these students and to teach in a way that maximizes their learning.

One way in which teacher education programs could successfully help their candidate interact well with classroom students is by encouraging teachers to become culturally responsive. Teachers who are culturally responsive acknowledge that the students' culture is central to student learning (The

Education Alliance at Brown University, 2005). Gay and Kirkland (2003) declare that culturally responsive teaching needs to be a fundamental aspect for teacher preparation programs. This can be a challenge because pre-service teachers come from traditional beliefs. The importance of culture on classroom instruction is derived "from evidence that cultural practices shape thinking processes, which serve as tools for learning within and outside of school" (Education Alliance at Brown University, 2005, p.3). Thus, pre-service teacher education programs must develop culturally responsive teachers who can interact with and relate to all students to help them succeed.

Educators who are knowledgeable about culturally responsive education accept, respect, and "use students' identities and backgrounds as meaningful sources (Nieto, 2000) for creating an optimal learning environment" (The Education Alliance at Brown University, 2005, p.3). Students come to school with their own set of beliefs, understanding, and skills and it is crucial that the school not ignore or replace prior knowledge but make links to this prior knowledge (Stephens, 2000). Jerome Bruner establishes in his book, *The Culture of Education* (1996), that the essential elements of the culture in which one learns is important to the learning process and for creating a culturally responsive classroom that embraces different cultures and allows each of the cultures to be acknowledged. In turn, this culturally responsive classroom will create a learning environment in which all students can be successful. However, culturally responsive "teachers need to acquire the skill of deeply understanding the

cultural norms other than their own. This sensitivity needs to be instilled during teacher training" (LeRoux, 2001, p. 45)

Challenge of Diversity Education in Pre-service Education Courses

Teacher preparation programs usually include a course on human relations that incorporates diversity education. Yet, Ference and Bell (2004) feel that to have a positive affect on the teachers, diversity education must be incorporated into multiple courses in the teacher education program. Infusing the education throughout a number of courses enables the future educators to figure out what they believe and how to tailor their teaching for all types of students.

Ference and Bell (2004) discuss the necessary elements of a teacher preparation program that will address these issues. "Curriculum needs to be reformed with inclusion of curriculum theory and historical inquiry so that bias in textbooks, media, and other educational materials can be detected easily by educators, students, and other stakeholders" (Ameny-Dixon, 2004, p. 5). Teacher education needs to be supportive of an ever-changing society so a teacher's values are not placed as the "right" values, and students are not judged by the teacher's values. This concept must be taught and reinforced in pre-service teacher education programs.

Teacher education is essential to creating a safe environment for all people. Burden et al. (2004) advocate changing teacher education by including "curriculum content and professional socialization experiences that enhance

intercultural sensitivity to better prepare novice teachers for working effectively with students of various cultures and ethnicities" (p. 173). College sometimes is the only experience future teachers have with diverse populations. This realization promotes the importance of diversity education. If teachers do not realize their own backgrounds and how this has influenced their diversity perception, then they may not know how to interact and teach students with different races, religions, backgrounds, and values. Courses that address diversity are critical (Heilman, 2004). Heilman, (2004) also encourages teacher preparation but acknowledges that educating pre-service teachers about diversity has always and will continue to be challenging.

> Culturally responsive teaching entails much more than simply teaching a culturally/ethnically diverse class. It is an active process of thinking, a state of mind, a way of seeing and learning that is shaped and influenced by the beliefs about the value of cultural relationships and cultural competency" (Le Roux, 2001, p. 41).

Currently, teacher education programs may have one course addressing characteristics of difference. Learning about diversity and incorporating the characteristics of difference into a classroom situation requires more than one opportunity to learn how to accomplish this. At the present time, pre-service teacher education programs have not placed characteristics of difference as a top priority. Allowing all students the opportunity to succeed must become a

priority for teacher education programs; incorporating education and training about the characteristics of difference is key to this success.

Purpose of the Study

The purpose of this study is twofold: to identify what characteristics of difference are addressed in teacher education classrooms across three teacher education programs in the Midwest, and to examine how teacher education faculty incorporate the characteristics of difference into instructional strategies, formal in-class activities, or outside classroom assignments.

Education preparation programs must place an emphasis on teaching and learning about diversity across all education courses. Having only one course required about diversity places a great deal of pressure on the curriculum of a particular course and does not promote an authentic perspective. Through a diversity audit, faculty can be asked directly about how they are addressing characteristics of difference and diversity education. This data can then be used to refine program curriculum and practice to include culturally responsive teaching. Skira et al. (2004, February) define a diversity audit as "a tool to guide schools in working toward equity and excellence" (p. 138). The survey used in this study can be such a tool.

Research Questions

1. What characteristics of difference do teacher education faculty identify and address in their teacher education coursework?
2. What differences exist across major methodologies (instructional strategies, formal in-class activities, or outside assignments) in pre-service teacher education classrooms when faculty members address a particular characteristic of difference?

Null Hypotheses

There is no significant difference across major methodologies (instructional strategies, formal in-class activities, or outside assignments) in pre-service teacher education courses when teacher education faculty address particular characteristics of difference.

Assumptions

1. It is assumed that all professors in the study are accurate and truthful with their responses on the survey.
2. It is assumed all of the professors in the study are currently employed in teacher education departments and are teaching teacher education courses.

3. For all statistical analysis, it is assumed that there is a normal distribution of measures from obtained responses.
4. By providing open-ended questions, participants have the opportunity to give perceptions and opinions beyond the formalized survey questions.

Limitations

1. Professors are reporting their own perceptions and learning activities on the survey instrument. Their own teaching experiences, professional development, and life experiences will influence how they respond.
2. Professors may report on the survey instrument what they believe are correct or acceptable answers rather then what they actually believe.
3. Professors are from different institutions with different expectations about teaching characteristics of difference throughout teacher education coursework.
4. All professors are teaching at Upper Midwestern universities and colleges.
5. The sample includes professors who teach in the teacher education program, but it does not include faculty members outside of teacher preparation departments, administrative faculty, administrators, and students.
6. There is no control group with which to compare survey responses.
7. The group of professors was not randomly selected.

Definitions

Characteristics of Diversity

Characteristics of diversity refers to a broad range of differences among students, including race, gender, sex, age, ethnicity, physical abilities, mental abilities, sexual orientation, education, social class, religion, and language that define the individual.

Ethnic Group

Ethnic group "is one that is socially distinguishable from other groups, has developed its own subculture – which can include nationality, religion, and language (Adams et al., 2000, p. 23).

Age

Age is the length of time a person has lived.

Economic Status

Economic status is household income.

Faith Based Institution

As an institution, the faculty agree with the mission statement or not in signing of the contract. In the mission statement of the college there is a direct connection with a religion and goal to connect faith with learning.

Gender Identity

Gender identity "refers to one's psychological sense of oneself as a male or female" (Adams et al., 1997, p. 115),

Gender Role

Gender role means "the socially constructed and culturally specific behavior and expectations for women (femininity) and men (masculinity)" (Adams, et al., 1997, p. 115).

Instructional Strategies

Instructional strategies are different teaching approaches a teacher chooses to achieve the learning objectives.

Language

The language that is their first language at home.

Mental Abilities

Mental ability refers to a student's academic ability

Parental Education

Education refers to the amount of formal education.

Physical Abilities

Physical ability refers to an individual is able to do with their physical body. Physical disabilities can entail hearing loss, physical challenges with muscles, eyesight, and other physical challenges.

Pre-service Education Students

Students who want to be teachers and are in the education program.

Race

Race "is a social or cultural concept rather than an inherent, observable characteristic, for all races are simply variations of a single human species of common prehistoric ancestry" (Adams et al., 2000, p. 23).

Sex

Sex refers to whether one is biologically female or male, based on genetic and anatomical sex.

Sexual Orientation

The sexual gender in which someone is attracted toward.

Procedures

A preliminary study of education professors was undertaken in the spring of 2006, to study to examine what characteristics of difference issues have been addressed and what instructional strategies have been used to address the characteristics of difference in their teacher education courses.

- A pilot study of professors teaching teacher education courses was administered at Central College in Pella, IA.
- The researcher contacted the three institutions to inquire as to if they are interested in participation in the research study. After gaining permission, the researcher asked the head of the department to provide a list of professors and instructors who teach pre-service education courses as well as their email addresses.

- The researcher contacted each subject through a letter requesting participation in this research study. Included in the letter was an explanation of research study without leading on to the information that may skew the data. Along with this information, the electronic link to survey was included.
- After two weeks, participation percentages were checked and an additional letter was emailed asking for participation to those who have not participated.
- The researcher sent a thank-you letter to those who participated along with the results and findings of this study.
- Participation percentages were recorded. Data was gathered and a Chi-Square Goodness of Fit, an inferential test, was used to compute the level of statistical difference across types of instructional strategies used among teacher education faculty to address characteristics of difference.

Chapter 2

REVIEW OF THE LITERATURE

The challenge of educating a diverse population is not education's only problem or even a new one: the United States has always had an immigrant population that added characteristics of difference to the dominant culture. However, the level and variety of these characteristics of differences have never been more compelling. For example, 42% of public school students, in 2001, were part of a racial or ethnic group besides Caucasian, increasing from 22% in 1972 (National Center for Education Statistics, 2003b). Yet, 87% of current educational instructors are Caucasian, female, and from the middle socioeconomic class (Cruz and Patterson, 2005). Obviously, Teacher Education Programs that address diversity are crucial for pre-service teachers to develop the knowledge, skill, and dispositions to teach all students. This literature review will investigate current studies that inform the area of diversity education within the framework of social constructivism. It includes a section on social constructivism, communities of practice theory, learning in and authentic context, past experience, critical thinking and reflection, membership in a community, and making meaning.

Social Constructivism

The concept of constructivism deals with emerging views of learning wherein new information is added to existing mental frameworks. Social constructivism adds the element that members of a social group are mutually negotiating meaning of ideas and practices. "Constructivists hold that knowledge is constructed by individuals in concert with their social, political, and cultural environments" (Furman, Jackson, Downey and Shears, 2003, p. 265). The most critical element of social constructivism is that individuals respond to people and events around them based on their own prior experience and beliefs. Culture is central to learning and must be incorporated into the teaching classroom and not considered an after thought.

According to Kim (2001), social constructivism relies on individuals' assumptions about reality, knowledge, and learning. Reality is then constructed through interaction and activities among a group of individuals. An individual's knowledge, then, is created by his or her interaction with others and the environment in which the interaction happens. From this perspective, learning is a social process and meaningful learning only occurs when students are involved in social activities and interactions (Atherton, 2005). Without having teachers who understanding working with diverse populations, students will not learn because the classroom climate will not encourage social activities and interactions. To prepare teachers, teacher education faculty members need to address characteristics of difference.

Jerome Bruner in *The Culture of Education* (1996) informs educators that they should teach information in the context of the cultures. Bruner states "reality construction is the product of meaning-making shaped by traditions and by a culture's toolkit of ways of thought" (p. 19). This is crucial to teaching students because students come into class with a variety of backgrounds and cultures. Understanding cultural influences in addition to the environment in which learning occurs enables educators to interact with students who are influenced by these cultures.

In addition to reality, knowledge, and learning, an educator must understand the intersubjectivity of social learning. "Intersubjectivitiy is a shared understanding among individuals whose interaction is based on common interests and assumptions that form the ground for their communication (Rogoff, 1990). Communication and interactions entail socially agreed-upon ideas of the world and the social patterns and rules of language use" (Ernest, 1999 as cited in Kim, 2001, para 6). Teachers must be made aware of their own intersubjective meanings so that they might understand new information and interactions that arise in the community.

Social constructivists establish that the context in which learning happens and the social contexts that the individual learners present to their learning environment are critical to making learning meaningful (Atherton, 2005; Kim, 2001; Shuaib, 2001). Therefore, since each learner is complex, a teacher must be ready to support learners who exhibit unique needs. Cooper (2005) advises

educators to celebrate the differences and "encourage the learner to arrive at his or her own version of the truth, influenced by his or her background culture, or embedded worldview" (p. 33). In this way, the learner may be actively involved in the learning process. Instructional models that support social constructivism include "reciprocal teaching, peer collaboration, cognitive apprenticeships, problem-based instruction, webquests, anchored instruction and other methods that involved learning with others" (Shunk, 2000 as cited in Kim, 2001, para 5). This theory provides a natural framework for considering proper diversity training for teachers so that all individuals will be taught effectively.

Along with cultural sensitivity developed through social constructivism, teachers must also encourage community building and transformative learning to maximize academic achievement and the personal growth of their students. Without elements of community and transformational learning, the classroom remains the domain of the teacher and students are not compelled to take responsibility for their own learning. Creating a community in which everyone benefits allows both the students and teacher to continue to learn from one another. In addition, transformative learning can enable students and teachers to comprehend their own frames of mind and realize how these lens influence what and how they learn.

Communities of Practice Theory

Within the Communities of Practice Theory, the community works together to place learning at the center. This group negotiates understanding in regards to the purpose of the community. Within this community concept, both teachers and students must support the social community by being accepted and taking an active role in the community. Learning is defined as "increasing involvement in the community"(Bjorke, 2004, para 6). This interaction must evolve or generate a common purpose. Even when a newcomer arrives, the community must help the individual to become a part of the community. Individuals must play an active role so that the community benefits along with the individual. This theory is especially meaningful to teachers who must understand how to incorporate all students in the classroom community.

There are five central learning concepts included in the communities of practice: authentic contexts, past experiences, critical thinking and reflection membership in the community, and the purpose of meaning-making. Allowing an authentic context enables the learner to feel as if they are a part of the learning. Knowing and acknowledging those experiences that influence whatever is viewed is crucial to creating a learning environment in which all students will thrive. Critical thinking and reflection allow the community to transform into a common place. Moreover, feeling as if one is a member of the community working toward a stronger community in addition to benefiting individually from the community is

key to making a solid community. Academically, all learning must seem meaningful to the learner instead of just a test or community service.

Communities of practice build on the elements of working as a team, but they must also develop concern for an ongoing sense of community where all have vested time and energy (Wisker, 2005). This theory lends itself to the study of diversity because it encourages teachers to look at each student both as an individual and as a team member in a classroom community.

Diversity is a broad term, incorporating the following twelve different elements in this study: race, ethnicity, gender, sex, age, physical abilities, mental abilities, sexual orientation, parent's education level, language, religion, and socio-economic status. Most teachers are trained to celebrate specific months or adding extra information into the curriculum to cover different ethnic groups but few are trained to analyze flaws in curriculum where groups are left out (Banks, 2005). Through a community of practice, the community members would come to understand what this broad range of diversity means and how it influences and affects the classroom. Unless an entire group actively participates in the community and allows the community to benefit from members' active participation, the community never grows. Wasonga and Piveral (2004) found through their study that it is essential that 'teacher educators should put forth conscious efforts to model multiculturalism irrespective of ethnic-racial-gender diversity in the pre-service teacher population" (p. 47). To build this type of

community in a Teacher Education Program, diversity education must start in teacher education courses where everyone believes and lives what they teach.

Learning in an Authentic Context

Ideally, education occurs in an authentic context, McAllister and Irvine (2002) studied 34 teachers from a southeastern city who participated in a 40-hour seminar called CULTURES (Center for Urban Learning Teaching and Urban Research in Education Schools.) Twenty-six were African American, and eleven taught at high-poverty level schools. The teachers had varying degrees of previous class-cultural experiences. The teachers participated in seminars that included in-class activities, a Bafa Bafa simulation, and visited families in different cultural climates. McAllister and Irvine examined teacher's beliefs about empathy through teachers' applications to project, project report, exit interviews, and final report. All data was self-reported. All teachers felt that empathy was an important factor in working with diverse students. Three specific activities were perceived as valuable including Bafa Bafa, immersion into four different cultural communities, and reflection on their own experiences as members of historically oppressed groups. McAllister and Irvine concluded that positive interactions with students, a supportive classroom climate, and student-centered classrooms all are products of empathy. Allowing teachers to interact in authentic climates expanded their understanding.

Yet, some authentic occurrences do not allow for complete freedom in practice. Price and Valli (2005) studied pre-service teacher programs by following four pre-service teachers through their experience using action research. Clinical experiences did not provide an opportunity to implement social justice activities, as the pre-service teachers would have liked to do. Through studying these individuals, the researchers found that to be a highly qualified teacher, one must be challenged in their own beliefs. Along with this support, teacher education programs must instill passion and reason into the teachers with both action and understanding. To fully change the classroom situation to an equitable and accepting environment, teachers must be ready to have their own beliefs challenged. Even though the semi-authentic situation did not allow for total freedom, it did at least allow the teacher to start to build a community.

Despite Dinero's findings, pre-service teacher education often does not include situations that are authentic in a particular culture or community. For example, Dinero (2004) highlighted the cultural issues with non-Native Alaskan schoolteachers who teach Native Alaskans when he warned of conflicts such as "the difference in values between teachers and students – such as a western emphasis upon competition and getting ahead versus an emphasis upon sharing and cooperation" (p. 405). Only "6% of Alaska's teacher populations are native teachers"(Dinero, 2004, p. 405) which has caused an issue because teachers and students do not have a common connection about their culture. In addition to Native Alaskan cultural differences other "countries, particularly in South Eastern

Asia, value collectivism where personal needs are often differed to the larger group"(McBride et al., 2002, p.132). Through a case study, Dinero (2004) analyzed a Yukon village's different perspectives between parents and teachers in regards to education. Teachers were trained to encourage competition while parents promoted working toward a stronger community and not individualized success. The researcher interviewed 35 households and teachers of the school. Because of these different perspectives, teachers and households in the school experienced a high level of distrust. Dinero (2004) found teachers needed more pre-service diversity training to be more prepared to support a community rather than using their own cultural experiences as the correct reference point for behavior. Learning in an authentic context would help teachers prepare for these situations.

Pre-service teacher education students are generally eager to learn about a variety of students, but a lack of prior interaction or diversity knowledge may cause these pre-service teachers teacher to revert to their comfort zone. Taylor and Sobel (2003) studied a cohort of 62 pre-service teachers to evaluate what diversity training they had received and what influences it had on them as teachers. Through this qualitative study, the researcher established that internship experiences were crucial to being able to teach all students. Along with the internship, the modeling and mentoring of diversity in pre-service teacher education was critical to being able to understand and relate to students (Jenke, Lee and Kanpol, 2001). Students who took a methods course embedded in the

professional development school model was essential to being able to integrate diversity training into the classroom because the course modeled integrated curriculum and was taught by a variety of instructors. Participants selected the internship as the most beneficial to changing their attitudes. Again, the strongest part of the teacher education program dealt with an internship. Pre-service teachers were given the opportunity to be a part of a community in which they were able to give to and receive from the community.

Past Experiences

Education has been generally intended to teach dominant values and not necessarily confront them. Since middle-class teachers and administrators prominently organize educational institutions, policies and practices generally promote middle class values (Nesbit, 2006).

Training is essential to the increase of knowledge and teaching of diversity issues at both the pre-service and service levels. Teacher education "needs to begin with traditional beliefs and subsequently challenge them through activity, reflection, and discourse in both coursework, and field work throughout the duration of the program" (Parsons et al., 2004, p.50). This type of challenge was undertaken by Van Hook (2002), when he studied sixty-eight early childhood pre-service teachers and established that the teacher educators must be made aware of students' perceived barriers because it is vital to understanding of the obstacles students face everyday. Without recognizing their own preconceived

notions, teachers cannot interact efficiently with their students. Prior experience produces a lens through which all teachers view their students and classroom goals. Van Hook (2002) found that acknowledging past experience as a lens, however, allowed teachers to transform their own beliefs and encouraged active participation from their students.

Cockrell et al. (1999) used action research with 128 students participating, in a Foundation of Education course, to discover that a common issue for pre-service teachers was lack of interaction and relationships with a diverse population. Escamilla and Nathenson (2003) also found that pre-service teachers were reluctant to deal with controversial content or avoided subjects in which they did not feel like an expert. While Minor et al. (2002) established that preconceived concepts including experiences, knowledge, dispositions, beliefs, attitudes, and perceptions represented a multidimensional construct against effective teaching and needed to be addressed. Pre-service teachers' perceptions about characteristics of difference and diverse populations must be realized before teachers can be effective. This frame of mind will influence what is taught in the classroom and what values are accepted within the teacher education classrooms as well as K-12 classrooms.

To this end, Ference and Bell (2004) have stated that to have a positive affect on the teachers, diversity education must be incorporated into multiple courses. Infusing the education throughout a Teacher Education Program enables the future educators to figure out what they believe and how to teach all

types of students. "Curriculum needs to reformed with inclusion of curriculum theory and historical inquiry so that bias in textbooks, media, and other educational materials can be detected easily by educators, students, and other stakeholders" (Ameny-Dixon, 2004, p. 5). Because prior diversity experience is lacking (Cockrell et al., 1999), teachers need to have as much experience as possible in relating to diverse populations and issues through pre-service education programs.

Future educators are usually socialized in homogeneous communities and may not be able to relate to others who are different from them because they have no common prior experience (Banks et al., 2001). Watt et al. (2003) have declared that to be competent in multicultural aspects, teachers must be "sensitive and responsive, coupled with multicultural awareness of knowledge essential to creating multicultural campuses" (p. 32). Without this sensitivity and responsiveness, teachers may continue to do their best and not realize that they may be actually hurting children because of unrecognized or unacknowledged differences. "Yet differences abound not only in race and ethnicity, but in gender, age, residence, language, and education level" (Cruz and Patterson 2005, p. 40). Without acknowledging the lack of prior experience with individuals that are from a diverse background, teachers will have difficulty building a community in which the teacher and students are active participants. For example, Johnson (2002) studied six white classroom teachers and concluded that the role and relationships were discriminating when teachers had personal

experience with diversity. While Eifler, Potthoff, and Dinsmore (2004) validated personal connections in their study of 49 participants. They reported increasing one's own knowledge and positive dispositions is vital to becoming a competent teacher who relates well with students.

According to North Central Regional Educational Laboratory (2005b), this increase in knowledge is impacted by careful analysis and reflection as shown by:

> Chochran-Smith (1995) notes: In order to learn to teach in a society that is increasingly culturally and linguistically diverse, prospective teachers, as well as experienced teachers and teacher educators, need opportunities to examine much of what is usually unexamined in the tightly braided relationships of language, culture, and power in schools and schooling. This kind of examination inevitably begins with our own histories as human beings and as educators; our own experiences as member of particular races, classes, and genders and as children, parents, and teachers in the world. (p. 500) (quoted in North Central Regional Education Laboratory, 2005b, p. 1).

In addition to personal experiences and personal connections, materials and resources must be evaluated and representative of school population. Zittleman and Sadker (2002) studied 23 teacher education textbooks and found that there was a under representation of women and gender issues in the narrative content but there were twice as many pictures of females. To provide

appropriate education, teacher education textbooks must model inclusive language and a balance of diverse content. To realize the potential of looking at past experiences as a means of change, reflection about past experiences and their relationship to the current context must also occur.

Critical Thinking and Reflection

Critical thinking and reflection are central to community of practice and transformational learning because just living an experience is not going to change one's perception of that event. When an individual reflects on the experience, he or she can grow intellectually from that experience (Merriam, 2004). Without the opportunity to reflect, past experiences are seem as just memories and not a place in which growth could occur.

It is the role of the teacher to create an environment that changes these misconceptions and negative attitudes. To evaluate this environment, a teacher needs to reflect about her or his own beliefs along with the cultures of the students she or he is going to teach. Through reflective training, teachers would have the skills to succeed and become culturally responsive teachers. "Culturally responsive teachers need to acquire the skill of deeply understanding the cultural norms other than their own. This sensitivity needs to be instilled during teacher training" (LeRoux, 2001, p.).

Diversity training needs to be supportive of the ever-changing society. The critical issue becomes when teacher's values are placed as being the "right"

values and everyone is judged by the teacher's values. Burden et al. (2004) have advocated for a change in teacher preparation by including critical thinking and reflective opportunities: "curriculum content and professional socialization experiences that enhance intercultural sensitivity to better prepare novice teachers for working effectively with students of various cultures and ethnicities" (p. 173). Evans et al. (2005) also have explained how even if teachers are caring individuals, if they "have not been helped to come to grips with the role of cultural difference and biases in teaching, [they] will find it difficult to make a positive difference in the lives of language minority children" (p. 76). If teachers do not realize their own backgrounds and how this has influenced their diversity perception, how are teachers going to teach students that come from different races, religions, backgrounds, and values? Courses that address diversity are critical (Heilman, 2004); however, educating pre-service teachers about characteristics of difference has always been and will continue to be challenging. Through reflection and critical thinking, teachers have the opportunity to analyze their past experiences and examine through what lens they are viewing the world and classroom students.

In contrast to other studies that indicated a greater sensitivity to characteristics of difference resulted from increased experiences, Bakari (2003) found pre-service teachers perceptions and critical thinking about diverse populations was negatively impacted by experience. Most teacher education students in this study were white and from the middle class. Bakari (2003)

administered the Teaching African American Student Survey (TAASS) including two subscales: the Willingness to Teach African American Students (WTAAS) subscale and the Cultural Sensitivity Toward Teaching African American Students (CSTAAS) subscale, along with a researcher created instrument that measured pre-service teachers' attitudes toward teaching in general, to 415 pre-service teachers after their student teaching experience. The study consisted of three groups: group one was from a predominantly white public university in the Rocky Mountain region; group two contained three historically Black colleges and universities located within the same Southern city; and group three consisted of students from two predominantly white, private universities. Groups two and three were required to teach in ALANA (African, Latino, Asian, and/or Native American) school settings. Researchers found that the predominantly white group -group one, group three, and the pre-service teachers with the most exposure to African American students obtained the lowest scores on the TAASS. "African American preservice teachers are susceptible to the same resistance or ignorance as White preservice teachers as evidenced by TAAS scores" (Bakari, 2003, p. 651). These findings were unusual because Bakari had felt that those with the most experience with diverse populations would score higher on the TAASS.

As part of their accreditation process, Teacher Education Programs may have the responsibility to not only provide opportunities for reflecting about diversity but to meet standards that specify diversity training. Meeting such

standards in homogeneous population centers may involve creative method and resources. For example, Christal (2003) identified schools where teachers were not educated about Native American culture; however, using a virtual museum, students were exposed to the complexity of the Native American life. Teachers involved in this project felt that the virtual museum enabled students to learn about Native Americans when their classroom teachers lacked the background knowledge. Ference and Bell (2004) also established that teacher education programs could encourage students to learn about diverse populations. Their research studied 25 participants who attended six 90-minute seminars and read two books. Even with this small amount of education, Ference and Bell (2004) found that pre-service teachers started to notice cultural differences after they were taught to recognize them and had time to reflect upon them. Ference and Bell (2004) concluded that "training preservice teachers to be globally and culturally aware through cross cultural experiences requires self-reflection that addresses issues of social justice in our schools" (p. 343).

Reflection about characteristics of difference must become an integral part of all teacher education programs to both strengthen the community of practice that is education and the personal reflection of individual members. For example, Armour, Bain, and Rubio (2004) studied 52 field instructors using a pre-training and post training survey after following a model for diversity training workshops. Elements studied were evaluating the relationship with self, relationship with supervisor and relationship with agency. One of the key elements was

evaluating how the field instructors felt about the diversity training in relationship with themselves. At the end of the study, there were significant positive changes in participants' total scores, which occurred between the end of training and 6 month follow-up.

Without true reflection that points to need, teachers do not change. Marshall (2001) studied 206 pre-service teachers and veteran teachers to see if concerns about teaching culturally different students reflected their actual conceptualization of these students. The pre-service teachers were enrolled in an introductory education course, including diversity issues and an eight-week on-site school practicum. After the program, another questionnaire was provided that contained items about their concerns about working with diverse students. Pre-service teachers and veteran teachers continued to voice concerns about needing more diversity training to be effective in the classroom. Marshall concluded that multicultural teaching must be explored more, and cultural diversity is important in personal relationships that can impact the academic progress of students.

Membership in a Community

Establishing supportive school climate is crucial to creating effective teaching so that all students and teachers feel valued and welcome. Boyle-Baise (2005) studied 24 pre-service teachers who participated in a service-learning project. She found it was essential to find local identity to the school along with

making historic connections to enable pre-service teachers to value the importance of helping diverse students learn. Engaging pre-service teachers to have personal connections when learning about diversity empowered them to value and integrate accepting diverse populations and their own worldview instead of forcing her/his own beliefs.

To create a community atmosphere, one must be prepared to encourage connections between students and a variety of cultures. For example, teachers must be able to teach English Limited Learner (ELL) students the English language. But they also should educate their students in a way that would support their cultural needs. Yet, "70% of the teachers with English Limited Learners students in their classroom received no special training" (Evans et al., 2005, p. 76). Cultural needs are as essential as language skills because through understanding their cultural needs, one can customize their academic needs. Evans et al. (2005) has suggested, "perhaps more importantly for teacher preparation, language is not the only variation that ELL students bring into the classroom. They bring cultural differences that can divide as well. "Mainstream teachers may overlook the fact that many students who have learned English have vastly different backgrounds from their own" (p. 76).

Once a classroom community is established and all students feel like valued members, it is crucial to implement social justice. McDonald (2005) studied two elementary teacher education programs at Mills College and San Jose State University. Each made social justice and equity central to the

preparations of prospective teachers. Through intensive contact and pre and post surveys, McDonald examined the complexity of relationships and interactions. Through analysis, the research found both programs that intended to integrate social justice actually varied in practice.

Making Meaning

Even with a strong community in place, classroom students must make meaning about what they are learning to have real understanding of subject concepts. In their research, Wasonga and Piveral (2004) administered a survey to 19 pre-service teachers about modeling of instructional principles utilizing multicultural techniques in teacher education courses. The study found pre-service teachers perceived that the modeling and integration was crucial to establish the importance of multicultural education. In addition, following modeling and integrating of multicultural techniques in Teacher Education Classes, pre-service teachers reported they would be more apt to use these strategies in their own classroom.

Teachers also must see meaning into what they are teacher if there is to be change in their way of thinking and teaching. For instance, Escamilla and Nathenson-Mejia (2003) studied the attempt to increase diversity dialogue in a teacher education program using Latino children's literature. Through using fieldwork experience in a graduate level program, Latino children's literature was the basis of discussing diversity and implementation into the classroom. Most teachers in this program were afraid to address controversial issues in the

literature like cultural difference and systemic inequalities, but they promoted the universal themes of getting along with others. Teachers gained knowledge of the Latino culture by using this literature and applied these concepts in their field experiences if they felt comfortable with the information. Escamilla and Nathenson-Mejia (2003) established therefore, that including ethnic books into the curriculum of a teacher education program would enhance diversity education.

Inclusive policy and effective communications was also highlighted in a study by Taylor, S and Sobel, D. (2003). They investigated a cohort of pre-service teachers' feedback about teacher education using the professional development school model to "establish teachers' beliefs and behaviors relevant to addressing he needs of students whose backgrounds and abilities differ from their own" (p. 251). Through coursework, field experiences, and mentor programs, they established that in Teacher Education Programs "a need for more exposure, more explicit modeling and demonstration, more cultural information, and more candid conversations – is undoubtedly relevant to their teacher education" (p.256).

Students who are preparing to be teachers are not the only persons who need more diversity education. University faculty members for Teacher Education Programs also need continuing professional development about diversity issues. Marks and Smrekar (2003) illustrated this concept as they studied eight faculty members through using discussion, videos, pre-

questionnaires, reading Diversity Within Unity, and a post questionnaire. They found that teachers must incorporate diversity into the class by weaving it "throughout curriculum and pedagogy instead of teaching it as a separate class" (Marks and Smrekar, 2003) so that students will benefit from learning about diversity. It is evident through Marks and Smrekar's study of university faculty members and using *Diversity within Unity* (2001) as a basis, that training is essential to the situation of the diversity. All pre-service teachers wanted to have more training especially from actual classroom teachers with successful experiences. This study affirmed that infusing multiculturalism into all teacher education courses was determined as a crucial way to prepare students along with need for additional resources.

Transformational Learning

When reflection promotes action, it has the power to transform beliefs, attitudes, opinions, and emotions of the learner. While reflection is a strong process in itself, the learner must then create new ways of interpreting his or her experiences to transforming her or his learning.

> In transformational learning, one's values, beliefs, and assumptions compose the lens through which personal experience is mediated and made sense of. When this meaning system is found to be inadequate in accommodating some life experience, transformational learning can replace it with a new perspective, one that is "more inclusive,

> discriminating, open, emotionally capable of change and reflective; in other words, more developed"(Merriam, 2004, p. 61).

Without reflecting on actions and experiences, one may never transform. Sisola (2004) has explained that individuals must gain a greater control on their own learning. Through learning, the individual must realize the frames of reference in which the learning occurs. These frames of reference are used "to describe complex webs of assumptions, expectations, and values that act as filters through which we view the world and ourselves" (Sisola, 2004, para 3). These frames can be reformulated through a process of critical reflection. Teachers must be aware of their frames and those of their students to ensure that learning within their classrooms is relevant. Cranton (1994) defines transformative learning as "a comprehensive and complex description of how learners construe, validate, and reformulate the meaning of their experience" (as cited in Imel, 1998). To transform learning, one must be able to "change their frames of reference by critically reflecting on their assumptions and beliefs and consciously making and implementing plans that bring about new ways of defining their worlds" (Imel, 1998, papa 8).

The teacher must establish an environment that "builds trust, care and facilitates the development of sensitive relationships among learners" (Imel, 1998, papa 11) to develop a transformative classroom. The learners take on responsibility as well to create a climate in which others can construct their own meaning. Teachers must be trained to enable this learning environment to occur.

This theory lends itself to this study because it treats each learner as an individual with distinct differences yet recognizes the impact of the group. Diversity training enables teachers to appreciate multiple perspectives and lens with which to view classroom situations.

Because students have distinct backgrounds, simply presenting general information is not enough for students to transform their learning. Students must acknowledge the limitations of their current knowledge or perspectives (McGonigal, 2005). Teaching strategies that encourage transformative learning include the following methods: critical questioning, student research, understanding students' backgrounds, challenge discussions, reflection and cooperative learning (McGonigial, 2005). With the knowledge and implementation of these methods, teachers can offer intellectual openness and challenge their students to process their learning as well as the content.

Transforming Teacher Education Programs

To help bridge the gaps in Diversity Education, Teacher Education Programs and their faculty need to transform their training and teaching, to become culturally responsive themselves so that they can both teach and model behavior. Teachers who are culturally responsive acknowledge that the culture is central to student learning (The Education Alliance at Brown University, 2005). Moreover, Gay and Kirkland (2003) have asserted that culturally responsive teaching needs to be a fundamental aspect for teacher preparation programs.

This can be a challenge because pre-service teachers generally come from traditional backgrounds. The association of culture and classroom instruction is derived "from evidence that cultural practices shape thinking processes, which serve as tools for learning within and outside of school" (The Education Alliance at Brown University, 2005, p.3). Nelson (2004) proposes that Teacher Education Programs must offer the elements below:

> 1) An understanding of the large context of education (i.e., the socio-cultural and political understandings that would have enabled me to examine the assumptions of the dominant teaching/ learning model), 2) a supervised experience in a high needs school, 3) a facilitated process of reflective inquiry, and 4) an enlarged view of the role of the teacher (p. 478).

Reese (2005) has determined that to encourage students to succeed, pre-service and veteran teachers must put aside their preconceptions about students from different cultures and has confirmed. Commins and Miramontes (2006) assertion that "schools of education typically prepare their prospective teachers to work with some amorphous ' average student' – who is by implication middle class, native-English specking, and White" (p. 240). Commins and Miramontes (2006) have also emphasized that Teacher Education Programs must allow pre-service teachers to have the ability to reflect on their own preconceptions along with experiences with diverse populations.

Through her work, Rao (2005) has established that Teacher Education Programs need to change to increase pre-service teachers' knowledge and experience of diverse populations. She has proposed a three-phrase plan to improve Teacher Education Programs including the following components: a multicultural teacher education course/program, practicum component that should be connected the multicultural course work, and a yearlong internship working in classrooms. Moreover, Banks (2001) has encouraged Teacher Education Programs to transform their programs in the following ways:

> (1) uncover and identify their personal attitudes toward racial, ethnic, language, and cultural groups (2) acquire knowledge about the histories and cultures of the diverse racial, ethnic, cultural, and language groups within the nation and within their schools; (2) become acquainted with the diverse perspectives that exist within different ethnic and cultural communities; (4) understand ways in which institutionalized knowledge within schools, universities, and popular culture can perpetuate stereotypes about racial and ethnic groups; and (5) acquire the knowledge and skills need to develop and implement an equity pedagogy.

Banks' plan of transformation incorporates many elements of social justice.

Rodgers (2006), however, acknowledge that framing teacher education through social justice is "dual problem: a learning (vs. training) problem, and a political (vs. policy) problem" (p. 1269). The learning problems engage social constructivism as the way to reach diverse students. The concept of a political

problem leads to the assumption that education should create democratic citizens (Gurin, Nagda and Lopez, 2004). However, Rodgers (2006) states that part of the democratic element in teacher education is to work with diverse individuals. The fundamental change in teacher education programs is in the way pre-service teachers think and analyze teaching and not just learn and implement strategies to teach content (Rodgers, 2006). Transforming Teacher Education Programs must start with a fundamental shift from one multicultural course to integrating the entire concept of reflection of personal attitudes, perceptions, and beliefs into the entire program.

Most teachers would agree that their mission is to help students to succeed in the academic classroom. Yet, many teachers are only prepared to teach students who are similar to themselves and are only comfortable teaching through the lens with which they view the world. The research in this chapter, however, have presented theoretical and data-driven ideas about social-constructivism, community building, and transformative learning through which Teacher Education Programs can help their graduate develop the knowledge, skill, and dispositions necessary to reach all students.

Chapter 3

INTRODUCTION

The importance of preparing culturally responsive teachers in pre-service teacher education courses has been well documented. As part of being "highly qualified," these teachers need preparation for working with diverse body of students. Consequently, many studies focus on including multiculturalism as an aspect of teacher preparation about diversity issues. Yet, there has been a lack of research evaluating the breadth and depth of diversity training for pre-service teachers throughout their teacher education programs. To produce a highly qualified teacher who is able to teach a wide variety of students, teacher education programs must themselves model and address diversity issues throughout the program.

Purpose of Study

The purpose of this study is twofold: to identify what characteristics of difference are addressed in teacher education classrooms by faculty members from three teacher education programs in the Midwest, and to examine how these teacher education faculty incorporate the characteristics of difference into instructional strategies, formal in-class activities, or outside classroom assignments.

A mixed-method design was used to investigate what characteristics of difference are taught in pre-service education courses along with what types of instructional strategies are used to teach these items. Quantitative data was

collected through an electronic survey that was administered to all full-time teacher education faculty at the three institutions. The three higher education institutions were chosen so that faculty members from a public university, a secular private university, and a faith-based private college might all contribute to the sample. Teacher education faculty elected to participate or not participate in the survey. Qualitative data was gathered through three open-ended questions and was analyzed for themes relating to professional development and classroom practice.

Research Questions

1. What characteristics of difference do teacher education faculty identify and address in their teacher education coursework?
2. What differences exist across major methodologies (instructional strategies, formal in-class activities, or outside assignments) in pre-service teacher education classrooms when faculty members address a particular characteristic of difference?

Null Hypotheses

There is no significant difference across major methodologies (instructional strategies, formal in-class activities, or outside assignments) in pre-service teacher education courses when teacher education faculty address particular characteristics of difference.

Research Design Framework

This preliminary study incorporated quantitative and qualitative design elements. A quantitative design was chosen as the framework for this study to examine what characteristics of difference issues are addressed and what instructional strategies were used to address the characteristics of difference.

Open-ended questions were included in the survey to enable subjects to address their attitudes, perceptions about diversity, and what professional development they have had dealing with diversity. These methodologies were reflective of Creswell's dominant less – dominant model: "the researcher conducts the study with a single dominant paradigm. Only a small component of the overall study is undertaken from the alternative paradigm" (Schulze, 2003, p. 13). This study utilized the quantitative elements as the dominant while the open-ended questions represent the qualitative element (less-dominant) of the research. The combined quantitative/qualitative approach was appropriate for this preliminary study because it may help to determine the direction of future studies. The quantitative data analysis of survey data served to describe the characteristics of difference that are addressed in teacher education courses and to test the relationship between characteristics of difference and what instructional strategies were used by teacher education faculty. However, to explore attitudes and perceptions of professional development about diversity and how professors handle students who resent diversity, qualitative open-ended

questions were included in the survey. The quantitative and qualitative data were collected concurrently.

Using a concurrent-nested, mixed-methods research approach, the quantitative data, as the predominant data, was used to answer the research questions, and the qualitative data was used to add unstructured information that identified emerging trends and informed future research and potential professional development.

Independent Variables

Characteristics of difference: race, ethnicity, gender, sex, age, physical abilities, mental abilities, sexual orientation, education, social class, religion, and language.

Dependent Variables

Instructional strategies: lecture, whole class discussion, small group or cooperative group discussion, in-class formal activities, games and simulations, journaling, and outside assignments. These are dependent variables because they are measured in the study.

Demographic Variables

The demographic variables are teacher age, sex, number of years teaching at a college level, tenure, and amount of prior professional development on diversity.

Sample

Forty-eight teacher education professors who are currently teaching pre-service education courses at a public institution, a secular private institution, and a faith-based private institution were selected for this research study in order to obtain response from teacher education faculty who represent the three types of teacher education programs in Iowa. Participants were non-randomly selected as a convenience sample because of the institutions' willingness to participate in the study. Education Deans and Department Chairs at all the institutions provided email addresses of all full-time education faculty and sent an email to faculty asking for participation in the survey and supplying an electronic link to the online survey. A 50% response rate was garnered. The sample was not large enough to be representative of the total population of pre-service teacher education faculty members in the Midwest; therefore, the study does not have the expectation of generalizability of pre-service teacher education faculty. However, the data gathered can offer a snapshot of what is being done across three types of teacher education programs and can certainly provide information for future research.

Ethical Consideration

All education faculty members who were involved in any part of this study were treated in accordance with the Drake University Institutional Review Board guidelines for human participation research. Since this was a self-reported survey, there were no anticipated threats. In an emailed letter (see Appendix) all faculty members were asked, but not required, to participate. However, the instrument relied on the participating professors to answer truthfully. Also included in the e-mailed invitation to participate was the statement that those who chose to participate in the study were giving consent to the researchers to use that faculty member's answers in the study.

The electronic survey was taken in the privacy of the faculty members' homes or offices. All of respondents were college/university professors who had access to a computer, an online connection, and were on an equal status on being able to participate. Prior to the survey, the researcher agreed that the institutions or respondents' names will not be used or reported in this study. Each institution was given a report containing the aggregated data as well as the data particular to that institution for each institutions use. All individual participants were given the same instrument at the same time in order to standardize the responses.

Before the survey was administered for this research study, it was piloted with another teacher education faculty at a fourth institution to assure that the

instrument asked valid and reliable questions, and that the data gathered was data that the researcher could use to answer the research questions.

Instrumentation

Using previous studies as a foundation, a survey entitled *Diversity Issues in Teacher Education Courses* was created by the researcher to measure the dependent variables methods by which characteristics of difference are taught in teacher education programs in Iowa. A survey instrument was constructed using research literature as a foundation. This instrument was distributed as an electronic questionnaire through Websurveyor[tm] with closed and open-ended questions using a Likert-scale. Using 1 (strongly agree) to 5 (strongly disagree), participants were asked to choose an appropriate number. A no opinion option or not applicable was also included. The survey questions included general attitude toward importance of each characteristic of difference, and how teacher education faculty incorporated the characteristics of difference into instructional strategies. The questions were specific as to which instructional strategies were used, including the following methodologies: formal in-class activities, or outside classroom assignment. Among the questions were demographic questions, Likert-scale items, and three open-ended questions.

To increase reliability, the electronic survey was piloted at private Midwestern College to insure that the data would be useful identify specific characteristics of difference taught and instructional strategies used to teach characteristics of difference.

An electronic letter was sent to each teacher education faculty member that invited them to participate and explained the researcher's background in relation to the characteristics of difference. Participants were told that they were not required to participate and could omit any question(s). A web address was included with each electronic letter asking them to go to this link and complete the electronic survey. Through WebSurveyor™, participants were sent an anonymous email reminder to ask for participation in the survey. Administrators at each institution supported the survey with a memo to their faculty members.

Procedures

Pilot-Testing the Instrument

A pilot study was conducted March 2006, with eight teacher education faculty members from a Midwestern College to determine the reliability and validity of the survey instrument. Teacher education faculty members from this institution volunteered to pilot this survey in order to obtain data from their own programs.

Individuals were contacted via a campus professor's email to voluntarily complete the electronic survey on their own time.

Faculty members reported that they were able to access the websites; however, the electronic link was not hyperlinked when forwarded from a colleague. Professors commented that when they copied the web address, they had no technical difficulties answering the survey. In addition, each person reviewed each question for clarity. Each member provided feedback directly to the researcher either through answering an open-ended question on the survey or by email. Three teacher education faculty members asked for clarification of terms. The confusion about terminology, although limited, led the researcher to include a glossary of all characteristics of difference in the instructions of the survey so there would be no confusion. The piloting teacher education faculty members then believed that the final version was clear, and it would elicit information to answer the research questions. The pilot group commented the study was interesting, and they would like to have their institution's informational report from the survey.

Through a pilot study, a survey instrument, that had been previously untested, can provide an initial internal consistency measure (Creswell, 2003). The data was analyzed to determine if it could be used to answer the research questions.

Study

Following the pilot study and survey refinement in the Spring of 2006, a research study of education professors was undertaken to identify what characteristics of difference have been addressed in pre-service teacher education classroom across three teacher education programs in the Midwest. In addition, the survey sought to establish how teacher education faculty have incorporated the characteristics of difference into instructional strategies, formal in-class activities, or outside classroom assignments.

Quantitative Data Gathering

On April 6, 2006, the School of Education Dean and Education Department Heads from three institutions received an email asking for their support for this study. After gaining permission, the researcher obtained a list of professors and instructors who teach full-time pre-service education courses as well as their addresses and email addresses. On April 7, 2006, the researcher sent an electronic letter with an electronic link from Websurveyor^{tm} to each teacher education faculty member at one institution requesting participation following protocol of the Drake University Institutional Review Board. The faculty members were told that they could omit any questions and could stop answering the survey at anytime. On April 10, 2006, the Education Department Chair from the second institution emailed his teacher education faculty asking them to participate in this research study, including an electronic link to the survey. On April 11, 2006, the third Department Chair sent an electronic announcement

requesting participation in this study along with sending individual email addresses to researcher. The researcher sent an individual electronic email with electronic link to each email address. The electronic survey was left open from April 7, 2006 to May 15, 2006. After one week, participation percentages were checked and WebSurveyor™ sent a follow-up email asking for participation to those who have not participated. Electronic announcements were sent on April 18, 2006, April 24, 2006, April 28, 2006, May 2, 2006, and May 9, 2006. This data collection technique resulted in a 50% return rate. Kaplowiz, Hadlock, and Levine (2004) established that electronic surveys resulted in usually lower than 50% return rate and was a viable research instrument.

Quantitative Data Analysis

Survey results from teacher education faculty who responded were analyzed to assess whether there was a significant difference in the types of instructional strategies that are used to address characteristics of difference in teacher education programs.

Frequencies were computed for each characteristic of difference to address and examine trends. In addition to these descriptive statistics, a Chi-Square Goodness of Fit, an inferential test, was used to compute the level of statistical difference across types of instructional strategies used among teacher education faculty to address characteristics of difference. The .05 level was the target for significance.

Qualitative Data Gathering

Qualitative data was collected from all teacher education faculty members who participated in the survey. The qualitative data was collected concurrently on the electronic survey. The survey included questions that dealt with what professional development each teacher education faculty members had regarding diversity. In addition to professional development, the second open-ended question dealt with how teacher education faculty deal with students who do not agree with diversity. Themes were established along with data for future research studies and professional development opportunities for teacher education faculty.

Summary

This dissertation study was designed to assess whether or not there was a significant difference between faculty members in the types of instructional strategies that are used to address characteristics of difference in teacher education programs. This study used a concurrent, mixed-methods design. The results of this mixed methods dissertation study are presented and analyzed in Chapter Four of this dissertation.

Chapter 4

RESULTS

This dissertation study was conducted to identify what characteristics of difference are addressed in teacher education classrooms across three teacher education programs in the Midwest, and to examine how teacher education faculty incorporate the characteristics of difference into instructional strategies, formal in-class activities, or outside classroom assignments.

This study used survey research is a combination of quantitative and qualitative data gathering. Both the quantitative and the qualitative data was obtained from a survey (Appendix) administered by the online survey software, *WebSurveyor*^{tm}. It was analyzed with frequencies, descriptive measures, and a Chi-Square test.

In addition to the quantitative data, qualitative data was gathered from the responses of the open-ended questions on the survey. The data was analyzed for common and reacquiring themes.

Descriptive statistics that reported demographics of the teacher education faculty sample included the following variables: academic rank, years of teaching experience in higher education, tenure, age, sex, and race.

Procedures

Survey Process and Survey Sample

On April 6, 2006, the School of Education Dean and Education Department Heads from three institutions received an email asking for their support for this study. After gaining permission, the researcher obtained a list of professors and instructors who teach full-time pre-service education courses as well as their addresses and email addresses. On April 7, 2006, the researcher sent an electronic letter (Appendix) with an electronic link from Websurveyor™ to each teacher education faculty member at one institution requesting participation following protocol of the Drake University Institutional Review Board. The faculty members were told that they could omit any questions and could stop answering the survey at anytime. On April 10, 2006, the Education Department Chair from the second institution emailed his teacher education faculty asking them to participate in this research study, including an electronic link to the survey. On April 11, 2006, the third Department Chair sent an electronic announcement requesting participation in this study along with sending individual email addresses to researcher. The researcher sent an individual electronic email with electronic link to each email address. The electronic survey was left open from April 7, 2006 to May 15, 2006. After one week, seven-teacher education faculty responded and WebSurveyor™ sent a follow-up email (Appendix) asking for participation to those who have not participated. Electronic announcements (Appendix) were sent on April 18, 2006, April 24, 2006 (fifteen teacher faculty

responded) April 28, 2006 (nineteen responded) May 2, 2006 (twenty-one responded), and May 9, 2006 (twenty-four responded). In all, there was a total of twenty-four out of the sample of forty-eight who completed the online survey. This data collection technique resulted in a fifty percent (50%) return rate.

Data Presentation and Interpretation

The data in this chapter are presented and analyzed in three major sections. The first section includes descriptive data analysis of the demographic variables, the second section provides frequency counts and graphs about which characteristics of difference were covered in the classes along with what instructional strategies were used to teach the characteristics of difference, and the third section describes the qualitative analysis of the emerging themes collected from the open-ended questions of the survey instruments. The following research questions provided the framework for these sections:

1. What characteristics of difference do teacher education faculty identify and address in their teacher education coursework?
2. What differences exist across major methodologies (instructional strategies, formal in-class activities, or outside assignments) in pre-service teacher education classrooms when faculty members address a particular characteristic of difference?

Null Hypotheses

There is no significant difference across major methodologies (instructional strategies, formal in-class activities, or outside assignments) in pre-service teacher education courses when teacher education faculty address particular characteristics of difference.

Data Analysis

Demographics

In this study, six questions were used to acquire demographic information. Question 2 asked participants to "Please check the phrases below that best describes your current teaching positions." The results are shown in Table 1 as academic rank: Instructor, Visiting Professor, Assistant Professor, Associate Professor, and Full Professor.

Academic Rank

Table 1

Academic Rank of Sample

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Instructor	1	4.2	4.2	4.2
	Assistant Professor	7	29.2	29.2	33.4
	Associate Professor	9	37.5	37.5	70.9
	Full Professor	7	29.2	29.2	100.0
	Total	24	100.0	100.0	

Of those responding to this question (N=24), seven faculty, or twenty-nine percent (29%) of the sample, self-reported that their teaching ranks was that of "Full Professor." Nine respondents, or thirty-seven percent (37%) of the sample, reported their rank as that of "Associate Professor," seven, or twenty-nine percent (29%) reported their rank as that of "Assistant Professor," and one, or four percent (4%) reported their rank as "Instructor."

Years of Teaching Experience

Table 2 illustrates the frequency data for the demographic data report in Question 3 of the survey: "*Please indicate your years of teaching experiences in higher education.*"

Table 2

Years of Teaching Experience of Sample

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10	2	8.3	8.3	8.3
	12	1	4.2	4.2	12.5
	13	2	8.3	8.3	20.8
	14	1	4.2	4.2	25.0
	16	1	4.2	4.2	29.2
	17	2	8.3	8.3	37.5
	18	2	8.3	8.3	45.8
	19	1	4.2	4.2	50.0
	2	2	8.3	8.3	58.3
	20	1	4.2	4.2	62.5
	24	1	4.2	4.2	66.7
	29	1	4.2	4.2	70.8
	30	2	8.3	8.3	79.2
	4	1	4.2	4.2	83.3
	5	1	4.2	4.2	87.5
	6	1	4.2	4.2	91.7
	7	1	4.2	4.2	95.8
	8	1	4.2	4.2	100.0
	Total	24	100.0	100.0	

Table 2 provides the frequency counts for those respondents reporting the number of years of teaching experience in higher education. The number of years of teaching in higher education was reported as follows: five respondents (29%) reported teaching in higher education between 4 and 8 years; twelve teacher education faculty (50%) reported teaching experience between 10 and 19 years in higher education; five faculty (20.8%) had taught between 20 and 30 years. Seventy-one percent (71%) of the sample had taught 10 years or more in higher education. The minimum number of years of teaching experience reported was two years.

Tenure

Question 4 on the survey asked respondents to indicate their tenure status by answering the following question: "*Are you tenured?*"

Table 3

Tenure Status of Sample

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	9	37.5	37.5	37.5
	2	15	62.5	62.5	100.0
	Total	24	100.0	100.0	

Of the sample, nine, or 37.5%, reported they were not tenured and 15, or 62.5%, reported that they were tenured. The majority of the respondents were tenured.

Age

Question 5 on the survey asked the respondents to provide the following demographic information, "*Please indicate your age.*"

Table 4

Age of Sample

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	34	1	4.2	4.3	4.3
	35	1	4.2	4.3	8.7
	37	1	4.2	4.3	13.0
	40	1	4.2	4.3	17.4
	41	2	8.3	8.7	26.1
	43	1	4.2	4.3	30.4
	45	1	4.2	4.3	34.8
	46	1	4.2	4.3	39.1
	47	1	4.2	4.3	43.5
	52	4	16.7	17.4	60.9
	53	1	4.2	4.3	65.2
	54	1	4.2	4.3	69.6
	56	1	4.2	4.3	73.9
	58	1	4.2	4.3	78.3
	60	2	8.3	8.7	87.0
	61	1	4.2	4.3	91.3
	63	2	8.3	8.7	100.0
	Total	23	95.8	100.0	
Missing	System	1	4.2		
Total		24	100.0		

Table 4 provides the frequency count for those respondents reporting their age. Eight respondents (34.8%), self reported their age between 34 and 45 years. Six teacher education faculty (26%) members reported their age between 46 and 55 years. Seven faculty members (30.4%) reported their age was between 56 and 63 years. One faculty member omitted the question. The age of the faculty sample was relatively mature with thirteen respondents (56.4%) reporting their ages as 46 or older.

Sex

Question 6 on the survey asked the respondents to provide the following demographic information, *"Please indicate your sex."*

Table 5

Sex of Sample

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	19	79.2	79.2	79.2
	Male	5	20.8	20.8	100.0
	Total	24	100.0	100.0	

Of the twenty-four respondents, Table 6 shows that 79.2% were female and 20.8% were male. This result relates closely to the percentage of females associated with K-12 education, in 1999, 87% of elementary and secondary school teachers were Caucasian, female, and from the middle socioeconomic class (Cruz and Patterson, 2005).

Question 7 on the survey asked the respondents to answer the following question: *"Please indicate your race."*

Table 6

Race of Sample

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid No Response	1	4.2	4.2	4.2
African-American	3	12.5	12.5	16.7
Caucasian (1n-Hispanic)	19	79.2	79.2	95.8
Caucasian Hispanic	1	4.2	4.2	100.0
Total	24	100.0	100.0	

Table 7 illustrates the frequency count for those respondents reporting their race. Nineteen respondents (79.2%) self-reported their race as Caucasian, while three faculty (12.5%) reported African-American, and one teacher education faculty member (4.2%) reported Caucasian – Hispanic. One teacher education faculty member chose to not answer this question.

Frequency Data of Characteristics of Difference Taught

Survey items from Question 8, "*When teaching my teacher education classes, I include content about the following characteristics of difference,* "were used to examine the first research question.

Twelve characteristics of difference were listed and survey respondents were asked to choose between a 5-point Likert scale of "Strongly Agree," "Agree," "Not Sure," "Disagree," and "Strongly Disagree". A "Not Applicable" choice, although not part of the Likert scale, was also provided. The data was

coded as follows: 1=Strongly Disagree, 2=Disagree, 3=Not Sure, 4=Agree, and 5=Strongly Agree. The response choice of "Not Applicable" was coded with a 0.

Table 7

Frequency of Characteristics of Difference Addressed

Char of Dif	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	NA
Race (n=24)	45.8% (11)	54.2% (13)				
Ethnicity (n=23)	41.7% (10)	54.2% (13)				
Gender (n=24)	54.2% (13)	41.7% (10)	4.2% (1)			
Sex (n=24)	41.7% (10)	37.5% (9)	8.3% (2)	4.2% (1)		8.3% (2)
Age (n=24)	37.5% (9)	37.5% (9)	4.2% (1)	16.7% (4)		4.2% (1)
PhyAbl (n=23)	33.3% (8)	50% (12)		8.3% (2)		4.2% (1)
MenAble (n=23)	54.2% (13)	33.3% (8)		4.2% (1)		4.2% (1)
SexOr (n=24)	20.8% (5)	45.8% (11)		25% (6)		8.3% (2)
Ed Lev (n=23)	33.3% (8)	41.7% (10)	8.3% (2)	8.3% (2)		4.2% (1)
Lang (n=24)	45.8% (11)	50% (12)	4.2% (1)			
Rel (n=23)	20.8% (5)	37.5% (9)	12.5% (3)	12.5% (3)		12.5% (3)
SES (n=23)	70.8% (17)	20.8% (5)	4.2% (1)			

Figure 1

Frequency of Characteristics of Difference Addressed

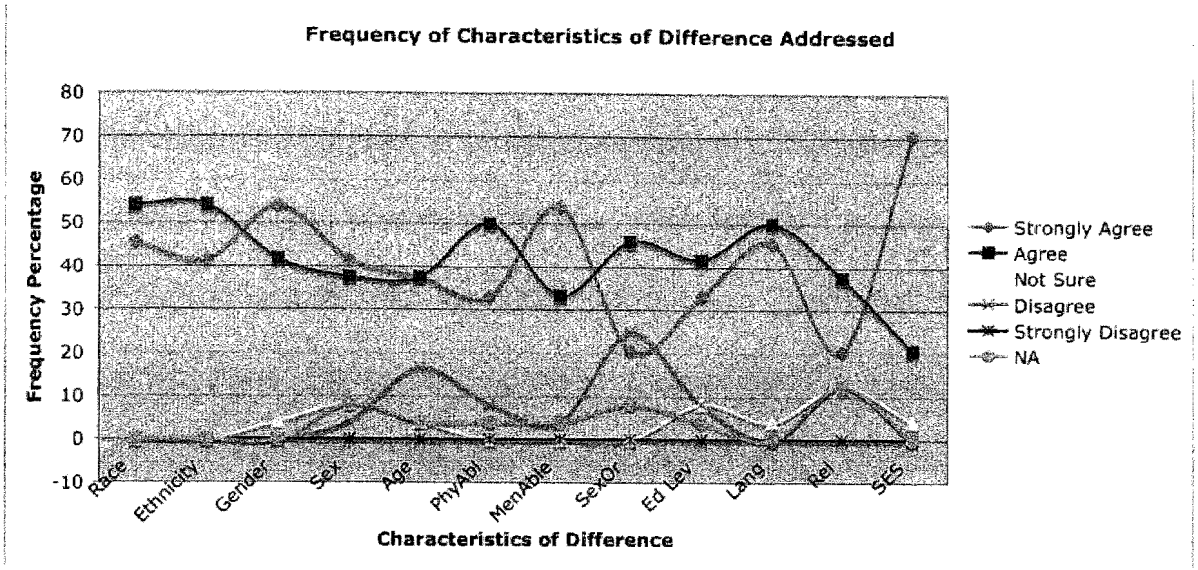

Table 7 illustrates that thirteen respondents (54.1%) selected "Agree" about including content about race. Eleven faculty members (45.8%) selected "Strongly Agree" about including content about race. All respondents (100%) agreed that they included information about race.

As illustrated by table 7, thirteen respondents (54.1%) selected "Agree" about including content about ethnicity. Ten faculty members (41.6%) selected "Strongly Agree" about including content about ethnicity. One faculty member (4.2%) elected to omit this answer. Twenty-three of the respondents (95.7%) agreed or strongly agreed that they included information about ethnicity.

Table 7 illustrates thirteen respondents (54.2%) selected "Strongly Agree" about including content about gender. Ten faculty members (41.7%) selected "Agree" about including content about gender. One faculty member (4.2%)

selected "Not Sure" about including content about gender. Twenty-three of the respondents (95.7%) agreed or strongly agreed that they included information about gender.

As illustrated by table 7, ten respondents (41.7%) selected "Strongly Agree" about including content about sex. Nine faculty members (37.5%) selected "Agree" about including content about sex. Two respondents (8.3%) selected "Not Sure" about including content about sex. One respondent (4.2%) selected "Disagree" about including content about sex. Two faculty members (8.3%) selected "Not Applicable" about including content about sex.

Table 7 illustrates nine respondents (37.5%) selected "Strongly Agree" about including content about age. Nine faculty members (37.5%) selected "Agree" about including content about age. One respondent (4.2%) selected "Not Sure" about including content about age. Four faculty members (16.7%) selected "Disagree" about including content about age. One respondent (4.2%) selected "Not Applicable" about including content about age.

As illustrated by table 7, eight respondents (33.3%) selected "Strongly Agree" about including content about physical abilities. Twelve faculty members (50%) selected "Agree" about including content about physical abilities. Two respondents (8.3%) selected "Disagree" about including content about physical abilities. One faculty member (4.2%) selected "Not Applicable" about including content about physical abilities.

Table 7 illustrates thirteen respondents (54.2%) selected "Strongly Agree" about including content about mental abilities. Eight faculty members (33.3%) selected "Agree" about including content about mental abilities. One respondent (4.2%) selected "Disagree" about including content about mental abilities. One faculty member (4.2%) selected "Not Applicable" about including content about mental abilities.

As illustrated by table 7, five respondents (20.8%) selected "Strongly Agree" about including content about sexual orientation. Eleven faculty members (45.8%) selected "Agree" about including content about sexual orientation. Six respondents (25%) selected "Disagree" about including content about sexual orientation. Two faculty members (8.3%) selected "Not Applicable" about including content about sexual orientation.

Table 7 illustrates eight respondents (33.3%) selected "Strongly Agree" about including content about education level. Ten faculty members (41.7%) selected "Agree" about including content about education level. Two respondents (8.3%) selected "Not Sure" about including content about education level. Two faculty members (8.2%) selected "Disagree" about including content about education level. One respondent (4.2%) selected "Not Applicable" about including content about education level.

Table 7 illustrates eleven respondents (45.8%) selected "Strongly Agree" about including content about language. Twelve faculty members (50%) selected

"Agree" about including content about language. One respondent (4.2%) selected "Not Sure" about including content about language.

As illustrated by table 7, five respondents (20.8%) selected "Strongly Agree" about including content about religion. Nine faculty members (37.5%) selected "Agree" about including content about religion. Three respondents (12.5%) selected "Not Sure" about including content about religion. Three faculty members (12.5%) selected "Disagree" about including content about religion. Three respondents (12.5%) selected "Not Sure" about including content about religion.

Table 7 illustrates seventeen respondents (70.8%) selected "Strongly Agree" about including content about socio-economic-status. Five faculty members selected "Agree" about including content about socio-economic-status. One respondent (4.2%) selected "Not Applicable" about including content about socio-economic-status.

Findings and Discussion of the Null Hypothesis

Survey items from Question 9, "*When I teach my teacher education classes, I address characteristics of difference in the following ways,* "were used to examine the second research question and test the Null Hypothesis.

Twelve characteristics of difference were listed and survey respondents were asked to choose which instructional strategy or strategies were used to address specific characteristics of difference. The respondent could choose

"yes" or "no" to each of the following instructional strategies: lecture, whole class discussion, small group or cooperative group discussion, student research presentations, in-class formal activities, games and simulations, journal, outside assignments or does not apply. The data was coded as follows: 2=yes, 1=no, 0=not applicable. A summary chart for Chi Square Goodness of Fit provides an overview of instructional method used to explore characteristics of difference. Frequency counts for instructional methods chosen to explore each characteristic of difference as well as Chi-Square Goodness of Fit tests for statistical difference follow in order.

Table 8

Chi Square Statistics Summary: Characteristics of Difference

	Lecture	Whole Class Discussion	Small or coop. grp. discussion	Student Research Presentations	In-Class Formal Activities	Games or Simulations	Journals	Outside Assignments	Does Not Apply
Race	.414	.000**	.221	.014*	.683	.000**	.000**	.014*	—
Ethnicity	.414	.001**	1.000	.014*	.683	.000**	.000**	.102	—
Gender	.414	.041*	.683	.041*	.683	.000**	.000**	.041*	.000**
Sex	.414	.414	.221	.004**	.041*	—	.000**	.004**	.000**
Age	.414	.683	.221	.000**	.102	.000**	.000**	.014*	.001**
Physical Abilities	1.000	.221	.414	.014*	.014*	.000**	.000**	.014*	.000**
Mental Abilities	.221	.014*	.221	.102	.221	.000**	.014*	.102	.000**
Sexual Orientation	.221	.683	.004**	.000**	.000**	.000**	.000**	.001**	.041*
Education Level	.683	.102	.014*	.004**	.000**	.000**	.000**	.001**	.000**
Language	.683	.001**	.221	.221	.221	.000**	.001**	.041*	—
Religion	.102	1.000	.004**	.004**	.000**	—	.000**	.000**	.041*
SES	.221	.001**	.414	.683	.102	.000**	.004**	.102	—

*Rejects null hypothesis – statistically significant beyond the .05 level
**Rejects null hypothesis – statistically significant beyond the .01 level

Race

Table 9

Frequency Percentages of Use of Lecture to Address Race

	Observed N	Expected N	Residual
1	10	12.0	-2.0
2	14	12.0	2.0
Total	24		

Table 10

Test Statistics: Use of Lecture to Address Race

	Race Lecture
Chi-Square	.667
df	1
Asymp. Sig.	.414

0 cells (.0%) have expected frequencies less than 5.
The minimum expected cell frequency is 12.0.

Table 9 indicates that fourteen teacher education faculty members (58%) used the instructional strategy of lecture to address race. Ten respondents (41.6%) selected that they did not use lecture to address race. Table 10 illustrates that the Chi-Square Goodness of Fit test reported significant difference at .414. Therefore, the null hypothesis is accepted.

Table 11

Frequency Percentages of the Use of Whole Class Discussion to Address Race

	Observed N	Expected N	Residual
1	3	12.0	-9.0
2	21	12.0	9.0
Total	24		

Table 12

Test Statistics: Use of Whole Class Discussion to Address Race

	Race Whole Class
Chi-Square	13.500
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-one (87.5%) respondents used whole class discussion to address race in teacher education courses. While three faculty members (12.5%) stated that they did not use whole class discussion to address race. Table 12 illustrates the Chi-Square Goodness of Fit test reported significant differences at beyond the .001 level. Therefore, the null hypothesis is rejected. There is a significant difference beyond the .001 level in respondents who used whole class discussion to address race.

Table 13

Frequency Percentages of Use of Small Group or Cooperative Group Discussion to Address Race

	Observed N	Expected N	Residual
1	9	12.0	-3.0
2	15	12.0	3.0
Total	24		

Table 14

Test Statistics: Use of Small Group or Cooperative Group Discussion

	Race Small GRP
Chi-Square	1.500
df	1
Asymp. Sig.	.221

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 13 illustrates that fifteen respondents (62.5%) used small group or cooperative group discussion to address race in their teacher educational courses. Nine faculty members (37.5%) stated that they did not use small group or cooperative group discussion to address race. Table 14 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .221 level. Therefore, the null hypothesis is accepted.

Table 15

Frequency Percentages of Use of Student Research Presentation to Address Race

	Observed N	Expected N	Residual
1	18	12.0	6.0
2	6	12.0	-6.0
Total	24		

Table 16

Test Statistics: Use of Student Research Presentation to Address Race

	RACE SRP
Chi-Square	6.000
df	1
Asymp. Sig.	.014

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Eighteen respondents (75%) did not use student research presentations to address race in their classroom, while six faculty members (25%) used student research presentations to address race. Table 16 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .014 level. Therefore, the null hypothesis is rejected.

Table 17

Frequency Percentages of Use of In-Class Formal Activities to Address Race

	Observed N	Expected N	Residual
1	11	12.0	-1.0
2	13	12.0	1.0
Total	24		

Table 18

Test Statistics: Use of In-Class Formal Activities to Address Race

	Race In-Class Formal Activities
Chi-Square	.167
df	1
Asymp. Sig.	.683

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 17 illustrates the frequency of using in-class formal activities to address race in a teacher education classroom. Thirteen faculty members (54%) said they did use the instructional strategy of in-class formal activities were used to address race yet eleven respondents (45.8%) stated they did not use this strategy to address race. Table 18 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .683 level. Therefore, the null hypothesis is accepted.

Table 19

Frequency Percentages of Use of Games and Simulations to Address Race

	Observed N	Expected N	Residual
1	23	12.0	11.0
2	1	12.0	-11.0
Total	24		

Table 20

Test Statistics: Use of Games and Simulations to Address Race

	Race Games
Chi-Square	20.167
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

As illustrates in Table 19, only one respondent (4.2%) stated that they used the instructional strategy of games and simulations to address race in their classroom. Twenty-three faculty members (95.8%) selected that they did not use this instructional strategy to address race. Table 20 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 21

Frequency Percentages of Use of Journals to Address Race

	Observed N	Expected N	Residual
1	21	12.0	9.0
2	3	12.0	-9.0
Total	24		

Table 22

Test Statistics: Use of Journals to Address Race

	Race Journal
Chi-Square	13.500
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-one teacher education faculty members (87.5%) selected that they did not use journals as an instructional strategy for addressing race. Only three respondents (12.5%) selected that they did use journals to educate about race. Table 22 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected

Table 23

Frequency Percentages of Use of Outside Assignments to Address Race

	Observed N	Expected N	Residual
1	17	12.0	5.0
2	7	12.0	-5.0
Total	24		

Table 24

Test Statistics: Use of Outside Assignments to Address Race

	Race Outside
Chi-Square	4.167
df	1
Asymp. Sig.	.041

a 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 23 illustrates that seventeen respondents did not use outside assignments to address race. Seven participants selected that they used outside assignments to address race in their teacher education classrooms. Table 24

illustrates the Chi-Square Goodness of Fit test reported significant differences at the .041 level. Therefore, the null hypothesis is rejected.

Table 25

Frequency Percentages of DOES NOT APPLY to Address Race

	Observed N	Expected N	Residual
1	24	24.0	.0
Total	24		

This variable is constant. Chi-Square Test cannot be performed.

Table 25 revels that twenty-four respondents (100%) chose no to the question of addressing race as it does not apply to teacher education courses. Instead, all participants felt that teaching race was important to the classroom.

Table 26

Frequency Percentages of Use of Lecture to Address Ethnicity

	Observed N	Expected N	Residual
1	10	12.0	-2.0
2	14	12.0	2.0
Total	24		

Table 27

Test Statistics: Use of Lecture to Address Ethnicity

	Ethnicity Lecture
Chi-Square	.667
df	1
Asymp. Sig.	.414

a 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Through looking at Table 26, fourteen respondents (58%) selected that they did use lecture to address ethnicity while ten faculty members (41.6%) said they did not use this instructional strategy. Table 27 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .414 level. Therefore, the null hypothesis is accepted.

Table 28

Frequency Percentages of Use of Whole Class Discussion to Address Ethnicity

	Observed N	Expected N	Residual
1	4	12.0	-8.0
2	20	12.0	8.0
Total	24		

Table 29

Test Statistics: Use of Whole Class Discussion to Address Ethnicity

	Ethnicity Whole Class Discussion
Chi-Square	10.667
df	1
Asymp. Sig.	.001

a 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty respondents (83.3%) said they used whole Class discussion to address ethnicity. Four teacher education faculty members (16.6%) responded that they did not use this strategy to address ethnicity. Table 29 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .001 level. Therefore, the null hypothesis is rejected.

Table 30

Frequency Percentages of Use of Small Group or Cooperative Group Discussion to Address Ethnicity

	Observed N	Expected N	Residual
1	12	12.0	.0
2	12	12.0	.0
Total	24		

Table 31

Test Statistics: Use of Small Group or Cooperative Group Discussion

	Ethnicity Small or Coop. Grp. Discuss
Chi-Square	.000
df	1
Asymp. Sig.	1.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twelve participants (50%) use small group or cooperative group discussion to teach ethnicity and twelve faculty members (50%) do not use small group or cooperative group discussion. Table 31 illustrates the Chi-Square Goodness of Fit test reported significant differences at the 1.000 level. Therefore, the null hypothesis is accepted.

Table 32

Frequency Percentages of Use of Student Research Presentations to Address Ethnicity

	Observed N	Expected N	Residual
1	18	12.0	6.0
2	6	12.0	-6.0
Total	24		

Table 33

Test Statistics: Use of Student Research Presentations to Address Ethnicity

	Ethnicity Student Research Present
Chi-Square	6.000
df	1
Asymp. Sig.	.014

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 32 illustrates that eighteen respondents (75%) do not use student research presentations to address ethnicity. Six faculty members (25%) do use student research presentations to address ethnicity. Table 33 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .014 level. Therefore, the null hypothesis is rejected.

Table 34

Frequency Percentages of Use of In-Class Formal Activities to Address Ethnicity

	Observed N	Expected N	Residual
1	11	12.0	-1.0
2	13	12.0	1.0
Total	24		

Table 35

Test Statistics: Use of In-Class Formal Activities to Address Ethnicity

	Ethnicity In-Class Formal Activities
Chi-Square	.167
df	1
Asymp. Sig.	.683

a 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Thirteen respondents (54.1%) selected that they do in deed use in-class formal activities to address ethnicity. While eleven selected (45.8%) that they did not use this instructional strategy to teach ethnicity. Table 35 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .683 level. Therefore, the null hypothesis is accepted.

Table 36

Frequency Percentages of Use of Games and Simulations to Address Ethnicity

	Observed N	Expected N	Residual
1	22	12.0	10.0
2	2	12.0	-10.0
Total	24		

Table 37

Test Statistics: Use of Games and Simulations to Address Ethnicity

	Ethnicity GAMES And Simulations
Chi-Square	16.667
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 36 illustrates that twenty-two faculty members (91.6%) did not use games and simulations to address ethnicity. Two participants (8%) selected that they used games and simulations to address ethnicity. Table 37 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 38

Frequency Percentages of Use of Journal to Address Ethnicity

	Observed N	Expected N	Residual
1	22	12.0	10.0
2	2	12.0	-10.0
Total	24		

Table 39

Test Statistics: Use of Journal to Address Ethnicity

	Ethnicity Journal
Chi-Square	16.667
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-two respondents (91.6%) did not use journals to address ethnicity. Two participants (8%) selected that they did use this instructional strategy to address ethnicity. Table 39 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 40

Frequency Percentages of Use of Outside Assignments to Address Ethnicity

	Observed N	Expected N	Residual
1	16	12.0	4.0
2	8	12.0	-4.0
Total	24		

Table 41

Test Statistics: Use of Outside Assignments to Address Ethnicity

	Ethnicity Outside Assignments
Chi-Square	2.667
df	1
Asymp. Sig.	.102

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 40 shows that sixteen respondents (66%) did not use outside assignments to address ethnicity while eight individuals (33%) did use outside assignments. Table 41 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .102 level. Therefore, the null hypothesis is accepted.

Table 42

Frequency Percentages of Does Not Apply to Address Ethnicity

	Observed N	Expected N	Residual
1	24	24.0	.0
Total	24		

This variable is constant. Chi-Square Test cannot be performed.

All respondents (100%) felt that ethnicity did apply to the classroom.

Gender

Table 43

Frequency Percentages of Use of Lecture to Address Gender

	Observed N	Expected N	Residual
1	10	12.0	-2.0
2	14	12.0	2.0
Total	24		

Table 44

Test Statistics: Use of Lecture to Address Gender

	Gender Lecture
Chi-Square	.667
df	1
Asymp. Sig.	.414

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 43 illustrates that fourteen respondents (58%) use lecture to address gender. Ten faculty members (41.6%) did not use this instructional strategy to address gender. Table 44 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .414 level. Therefore, the null hypothesis is accepted.

Table 45

Frequency Percentages of Use of Whole Class Discussion to Address Gender

	Observed N	Expected N	Residual
1	7	12.0	-5.0
2	17	12.0	5.0
Total	24		

Table 46

Test Statistics: Use of Whole Class Discussion to Address Gender

	Gender Whole Class Discussion
Chi-Square	4.167
df	1
Asymp. Sig.	.041

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Seventeen respondents (70.8%) selected that they used whole Class discussion to address gender. Seven faculty members (29%) selected that they did not use this instructional strategy to address gender. Table 46 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .041 level. Therefore, the null hypothesis is rejected.

Table 47

Frequency Percentages of Use of Small Group or Cooperative Group Discussion to Address Gender

	Observed N	Expected N	Residual
1	11	12.0	-1.0
2	13	12.0	1.0
Total	24		

Table 48

Test Statistics: Use of Small Group or Cooperative Group Discussion to Address Gender

	Gender Small or Coop. Grp. Discuss
Chi-Square	.167
df	1
Asymp. Sig.	.683

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 47 illustrates that thirteen respondents (54%) use small group or cooperative group discussion to address gender. While eleven teacher education faculty members (45.8%) did not select this instructional strategy as one in which they use to address gender. Table 48 illustrates the Chi-Square

Goodness of Fit test reported significant differences at the .683 level. Therefore, the null hypothesis is accepted.

Table 49

Frequency Percentages of Use of Student Research Presentations to Address Gender

	Observed N	Expected N	Residual
1	17	12.0	5.0
2	7	12.0	-5.0
Total	24		

Table 50

Test Statistics: Use of Student Research Presentations to Address Gender

	Gender Student Research Presentations
Chi-Square	4.167
df	1
Asymp. Sig.	.041

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Seventeen respondents (70.8%) did not use student research presentations to address gender. Seven faculty members (29%) selected that they did use this instructional strategy to address about gender. Table 50 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .041 level. Therefore, the null hypothesis is rejected.

Table 51

Frequency Percentages of Use of In-Class Formal Activities to Address Gender

	Observed N	Expected N	Residual
1	13	12.0	1.0
2	11	12.0	-1.0
Total	24		

Table 52

Test Statistics: Use of In-Class Formal Activities to Address Gender

	Gender In-Class Formal Activities
Chi-Square	.167
df	1
Asymp. Sig.	.683

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 51 illustrates that thirteen faculty members (54%) selected that they did not use in-class formal activities to address gender. Eleven respondents (45.8%) selected "yes" they did use in-class formal activities to address gender. Table 52 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .683 level. Therefore, the null hypothesis is accepted.

Table 53

Frequency Percentages of Use of Games and Simulations to Address Gender

	Observed N	Expected N	Residual
1	23	12.0	11.0
2	1	12.0	-11.0
Total	24		

Table 54

Test Statistics: Use of Games and Simulations to Address Gender

	Gender Games
Chi-Square	20.167
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-three respondents (95.8%) selected "no" they do not use games and simulations to address gender. Only one respondent (4.2%) selected "yes" to using this instructional strategy. Table 54 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 55

Frequency Percentages of Use of Journal to Address Gender

	Observed N	Expected N	Residual
1	21	12.0	9.0
2	3	12.0	-9.0
Total	24		

Table 56

Test Statistics: Use of Journal to Address Gender

	Gender Journal
Chi-Square	13.500
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 55 illustrates that twenty-one faculty members (87.5%) do not use journal to address gender. Three respondents (12.5%) stated that they did use a journal to address gender. Table 56 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 57

Frequency Percentages of Use of Outside Assignments to Address Gender

	Observed N	Expected N	Residual
1	17	12.0	5.0
2	7	12.0	-5.0
Total	24		

Table 58

Test Statistics: Use of Outside Assignments to Address Gender

	Gender Outside Assignments
Chi-Square	4.167
df	1
Asymp. Sig.	.041

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Seventeen respondents (70.8%) did not use outside assignments to address gender. Seven faculty members (29%) did use this instructional strategy to teach gender. Table 58 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .041 level. Therefore, the null hypothesis is rejected.

Table 59

Frequency Percentages of Does Not Apply selection to Address Gender

	Observed N	Expected N	Residual
1	23	12.0	11.0
2	1	12.0	-11.0
Total	24		

Table 60

Test Statistics: Does Not Apply to Address Gender

	Gender Does Not Apply
Chi-Square	20.167
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-three respondents (95.8%) selected "no" to does not apply in relation to gender, while one faculty member (4.2%) selected "yes" to does not apply. Table 60 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Sex

Table 61

Frequency Percentages of Use of Lecture to Address Sex

	Observed N	Expected N	Residual
1	14	12.0	2.0
2	10	12.0	-2.0
Total	24		

Table 62

Test Statistics: Use of Lecture to Address Sex

	Sex Lecture
Chi-Square	.667
df	1
Asymp. Sig.	.414

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 61 illustrates fourteen respondents (58%) selected that they did not use lecture to address sex. Ten faculty members (41.6%) selected that they did use this instructional strategy to teach sex. Table 62 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .414 level. Therefore, the null hypothesis is accepted.

Table 63

Frequency Percentages of Use of Whole Class Discussion to Address Sex

	Observed N	Expected N	Residual
1	10	12.0	-2.0
2	14	12.0	2.0
Total	24		

Table 64

Test Statistics: Use of Whole Class Discussion to Address Sex

	Sex Whole Class Discuss
Chi-Square	.667
df	1
Asymp. Sig.	.414

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Fourteen faculty members (58%) said that did use whole class discussion to address sex. Ten respondents (41.6%) selected that they did not use this instructional strategy to teach sex. Table 64 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .414 level. Therefore, the null hypothesis is accepted.

Table 65

Frequency Percentages of Use of Small Group or Cooperative Group Discussion to Address Sex

	Observed N	Expected N	Residual
1	15	12.0	3.0
2	9	12.0	-3.0
Total	24		

Table 66

Test Statistics: Use of Small Group or Cooperative Group Discussion to Address Sex

	Sex Small or Coop Grp. Discuss
Chi-Square	1.500
df	1
Asymp. Sig.	.221

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 65 illustrates that fifteen respondents (62.5%) did not use small group or cooperative group discussion to address sex. While nine faculty members (37.5%) selected that did use small group or cooperative group discussion to address sex. Table 66 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .221 level. Therefore, the null hypothesis is accepted.

Table 67

Frequency Percentages of Use of Student Research Presentations to Address Sex

	Observed N	Expected N	Residual
1	19	12.0	7.0
2	5	12.0	-7.0
Total	24		

Table 68

Test Statistics: Use of Student Research Presentations to Address Sex

	Sex Student Research Presentations
Chi-Square	8.167
df	1
Asymp. Sig.	.004

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Nineteen respondents (79%) selected "no" that they did not use student research presentations to address sex. Five faculty members (20.8%) selected "yes" that they did use this instructional strategy. Table 69 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .004 level. Therefore, the null hypothesis is rejected.

Table 69

Frequency Percentages of Use of In-Class Formal Activities to Address Sex

	Observed N	Expected N	Residual
1	17	12.0	5.0
2	7	12.0	-5.0
Total	24		

Table 70

Test Statistics: Use of In-Class Formal Activities to Address Sex

	Sex In-Class Formal Activities
Chi-Square	4.167
df	1
Asymp. Sig.	.041

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 69 illustrates seventeen respondents (70.8%) did not use in-class formal activities to address sex. Seven faculty members (29%) selected that they did use in-class formal activities to teach sex. Table 70 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .041 level. Therefore, the null hypothesis is rejected.

Table 71

Frequency Percentages of Use of Games and Simulations to Address Sex

	Observed N	Expected N	Residual
1	24	24.0	.0
Total	24		

This variable is constant. Chi-Square Test cannot be performed.

All twenty-four respondents (100%) selected that did not use games and simulations to address sex.

Table 72

Frequency Percentages of Use of Journal to Address Sex

	Observed N	Expected N	Residual
1	21	12.0	9.0
2	3	12.0	-9.0
Total	24		

Table 73

Test Statistics: Use of Journal to Address Sex

	Sex Journal
Chi-Square	13.500
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-one faculty members (87.5%) selected "no" they did not use journals to address sex. Three respondents (12.5%) did use journals to address sex. Table 73 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 74

Frequency Percentages of Use of Outside Assignments to Address Sex

	Observed N	Expected N	Residual
1	19	12.0	7.0
2	5	12.0	-7.0
Total	24		

Table 75

Test Statistics: Use of Outside Assignments to Address Sex

	Sex Outside Assignments
Chi-Square	8.167
df	1
Asymp. Sig.	.004

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 74 illustrates that nineteen respondents (79%) did not use outside assignments to address sex. While five faculty members (20.8%) did use outside assignments. Table 75 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .004 level. Therefore, the null hypothesis is rejected.

Table 76

Frequency Percentages of Does Not Apply when Addressing Sex

	Observed N	Expected N	Residual
1	21	12.0	9.0
2	3	12.0	-9.0
Total	24		

Table 77

Test Statistics: Use of Does Not Apply to Address Sex

	Sex Does Not Apply
Chi-Square	13.500
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-one respondents (87.5%) felt that the topic of sex did apply to their teacher education classrooms. Three faculty members (12.5%) felt that this topic did not apply to their courses. Table 77 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

AGE

Table 78

Frequency Percentages of Use of Lecture to Address Age

	Observed N	Expected N	Residual
1	14	12.0	2.0
2	10	12.0	-2.0
Total	24		

Table 79

Test Statistics: Use of Lecture to Address Age

	Age Lecture
Chi-Square	.667
df	1
Asymp. Sig.	.414

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 78 illustrates fourteen respondents (58%) did not use lecture as an instructional strategy to address age. Ten faculty members (41.6%) did use this instructional strategy. Table 79 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .414 level. Therefore, the null hypothesis is accepted.

Table 80

Frequency Percentages of Use of Whole Class Discussion to Address Age

	Observed N	Expected N	Residual
1	11	12.0	-1.0
2	13	12.0	1.0
Total	24		

Table 81

Test Statistics: Use of Whole Class Discussion to Address Age

	Age Whole Class Discussion
Chi-Square	.167
df	1
Asymp. Sig.	.683

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Thirteen faculty members (54%) did use whole Class discussion to address age. While eleven respondents (45.8%) did not use this instructional strategy. Table 81 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .683 level. Therefore, the null hypothesis is accepted.

Table 82

Frequency Percentages of Use of Small Group or Cooperative Group Discussion to Address Age

	Observed N	Expected N	Residual
1	15	12.0	3.0
2	9	12.0	-3.0
Total	24		

Table 83

Test Statistics: Use of Small Group or Cooperative Group Discussion to Address Age

	Age Small or Coop. Grp. Discuss
Chi-Square	1.500
df	1
Asymp. Sig.	.221

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Nine respondents (37.5%) to address age used small group or cooperative group discussion. Fifteen faculty members (62.5%) did not use this strategy to address age. Table 83 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .221 level. Therefore, the null hypothesis is accepted.

Table 84

Frequency Percentages of Use of Student Research Presentations to Address Age

	Observed N	Expected N	Residual
1	21	12.0	9.0
2	3	12.0	-9.0
Total	24		

Table 85

Test Statistics: Use of Student Research Presentations to Address Age

	Age Student Research Presentations
Chi-Square	13.500
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 84 illustrates that twenty-one faculty members (87.5%) did not use student research presentations to address age. Three respondents (12.5%) selected "yes" they do use this strategy to address age. Table 85 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 86

Frequency Percentages of Use of In-Class Formal Activities to Address Age

	Observed N	Expected N	Residual
1	16	12.0	4.0
2	8	12.0	-4.0
Total	24		

Table 87

Test Statistics: Use of In-Class Formal Activities to Address Age

	Age In-Class Formal Activities
Chi-Square	2.667
df	1
Asymp. Sig.	.102

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Sixteen respondents (66.6%) did not use in-class formal activities to address age. While, eight faculty members (33.3%) did use this instructional strategy. Table 87 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .102 level. Therefore, the null hypothesis is accepted.

Table 88

Frequency Percentages of Use of Games and Simulations to Address Age

	Observed N	Expected N	Residual
1	22	12.0	10.0
2	2	12.0	-10.0
Total	24		

Table 89

Test Statistics: Use of Games and Simulations to Address Age

	Age Games
Chi-Square	16.667
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-two respondents (91.6%) did not choose to use games and simulations to address age in their teacher education courses. Two faculty members (8.3%) did use this strategy to address age. Table 89 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 90

Frequency Percentages of Use of Journal to Address Age

	Observed N	Expected N	Residual
1	22	12.0	10.0
2	2	12.0	-10.0
Total	24		

Table 91

Test Statistics: Use of Journal to Address Age

	Age Journal
Chi-Square	16.667
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 90 illustrates that twenty-two respondents (91.6%) do not use journals to address age. While two faculty members (8.3%) did use journals to address age. Table 91 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 92

Frequency Percentages of Use of Outside Assignments to Address Age

	Observed N	Expected N	Residual
1	18	12.0	6.0
2	6	12.0	-6.0
Total	24		

Table 93

Test Statistics: Use of Outside Assignments to Address Age

	Age Outside Assignments
Chi-Square	6.000
df	1
Asymp. Sig.	.014

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Eighteen faculty members (75%) did not use outside assignments to address age. Six faculty members (25%) did use outside assignments to address age. Table 93 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .014 level. Therefore, the null hypothesis is rejected.

Table 94

Frequency Percentages of Selection DOES NOT APPLY to Address Age

	Observed N	Expected N	Residual
1	20	12.0	8.0
2	4	12.0	-8.0
Total	24		

Table 95

Test Statistics: Does Not Apply to Address Age

	Age Does Not Apply
Chi-Square	10.667
df	1
Asymp. Sig.	.001

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty respondents felt that age did apply in their teacher education courses. While four faculty members selected "yes" to it did not apply in their classroom. Table 95 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .001 level. Therefore, the null hypothesis is rejected.

Physical Abilities

Table 96

Frequency Percentages of Use of Lecture to Address Physical Abilities

	Observed N	Expected N	Residual
1	12	12.0	.0
2	12	12.0	.0
Total	24		

Table 97

Test Statistics: Use of Lecture to Address Physical Abilities

	Physical Abilities Lecture
Chi-Square	.000
df	1
Asymp. Sig.	1.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 96 illustrates that twelve respondents (50%) use lecture to address physical abilities. Twelve respondents (50%) do not use this instructional strategy to teach physical abilities. Table 97 illustrates the Chi-Square Goodness of Fit test reported significant differences at the 1.000 level. Therefore, the null hypothesis is accepted.

Table 98

Frequency Percentages of Use of Whole Class Discussion to Address Physical Abilities

	Observed N	Expected N	Residual
1	9	12.0	-3.0
2	15	12.0	3.0
Total	24		

Table 99

Test Statistics: Use of Whole Class Discussion to Address Physical Abilities

	Physical Abilities Whole Class Discuss
Chi-Square	1.500
df	1
Asymp. Sig.	.221

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Fifteen faculty members (62.5%) use whole class discussion to address physical abilities. While nine respondents (37.5%) do not use whole class discussion. Table 99 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .221 level. Therefore, the null hypothesis is accepted.

Table 100

Frequency Percentages of Use of Small Group or Cooperative Group Discussion to Address Physical Abilities

	Observed N	Expected N	Residual
1	14	12.0	2.0
2	10	12.0	-2.0
Total	24		

Table 101

Test Statistics: Use of Small Group or Cooperative Group Discussion to Address Physical Abilities

	Physical Abilities Small or Coop. Grp. Discuss
Chi-Square	.667
df	1
Asymp. Sig.	.414

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 100 illustrates that fourteen respondents (58%) do not use small group or cooperative group discussion when addressing physical abilities. Ten faculty members (41.6%) use this instructional strategy to address physical abilities. Table 101 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .414 level. Therefore, the null hypothesis is accepted.

Table 102

Frequency Percentages of Use of Student Research Presentations to Address Physical Abilities

	Observed N	Expected N	Residual
1	18	12.0	6.0
2	6	12.0	-6.0
Total	24		

Table 103

Test Statistics: Use of Student Research Presentations to Address Physical Abilities

	Physical Abilities St. Research Pres.
Chi-Square	6.000
df	1
Asymp. Sig.	.014

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Eighteen respondents (75%) do not use student research presentations to address physical abilities. Six faculty members (25%) do use this strategy to address physical abilities. Table 103 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .014 level. Therefore, the null hypothesis is rejected.

Table 104

Frequency Percentages of Use of In-Class Formal Activities to Address Physical Abilities

	Observed N	Expected N	Residual
1	18	12.0	6.0
2	6	12.0	-6.0
Total	24		

Table 105

Test Statistics: Use of In-Class Formal Activities to Address Physical Abilities

	Physical Abilities In-Class Formal Act.
Chi-Square	6.000
df	1
Asymp. Sig.	.014

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 104 illustrates that eighteen faculty members (75%) do not use in-class formal activities to address physical abilities. While six respondents (25%) do use this strategy. Table 105 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .014 level. Therefore, the null hypothesis is rejected.

Table 106

Frequency Percentages of Use of Games and Simulations to Address Physical Abilities

	Observed N	Expected N	Residual
1	22	12.0	10.0
2	2	12.0	-10.0
Total	24		

Table 107

Test Statistics: Use of Games and Simulations to Address Physical Abilities

	Physical Abilities Games and Sim.
Chi-Square	16.667
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-two teacher education faculty members (91.6%) do not use games and simulations to address physical abilities. Two faculty members use games and simulations to address physical abilities. Table 107 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 108

Frequency Percentages of Use of Journal to Address Physical Abilities

	Observed N	Expected N	Residual
1	21	12.0	9.0
2	3	12.0	-9.0
Total	24		

Table 109

Test Statistics: Use of Journal to Address Physical Abilities

	Physical Abilities Journal
Chi-Square	13.500
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 108 demonstrates twenty-one faculty members (87.5%) do not use journals to address physical abilities. Three respondents (12.5%) stated that they do use journals to address physical abilities. Table 109 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 110

Frequency Percentages of Use of Outside Assignments to Address Physical Abilities

	Observed N	Expected N	Residual
1	18	12.0	6.0
2	6	12.0	-6.0
Total	24		

Table 111

Test Statistics: Use of Outside Assignments to Address Physical Abilities

	Physical Abilities Outside Assignments
Chi-Square	6.000
df	1
Asymp. Sig.	.014

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Eighteen respondents (75%) selected that they do not use outside assignments to address physical abilities. Six faculty members (25%) did use outside assignments to address physical abilities. Table 111 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .014 level. Therefore, the null hypothesis is rejected.

Table 112

Frequency Percentages Does Not Apply to Address Physical Abilities

	Observed N	Expected N	Residual
1	22	12.0	10.0
2	2	12.0	-10.0
Total	24		

Table 113

Test Statistics: Does Not Apply to Address Physical Abilities

	Physical Abilities Does Not Apply
Chi-Square	16.667
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-two respondents (95.8%) selected "no" to does not apply. While two faculty members (8.3%)selected "yes" to it does not apply in relation to physical abilities. Table 113 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is accepted.

Mental Abilities

Table 114

Frequency Percentages of Use of Lecture to Address Mental Abilities

	Observed N	Expected N	Residual
1	9	12.0	-3.0
2	15	12.0	3.0
Total	24		

Table 115

Test Statistics: Use of Lecture to Address Mental Abilities

	Mental Abilities Lecture
Chi-Square	1.500
df	1
Asymp. Sig.	.221

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 114 illustrates fifteen respondents (62.5%) use lectures to address mental abilities. Nine faculty members (37.5%) did not use this instructional strategy in relation to mental abilities. Table 115 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .221 level. Therefore, the null hypothesis is accepted.

Table 116

Frequency Percentages of Use of Whole Class Discussion to Address Mental Abilities

M	Observed N	Expected N	Residual
1	6	12.0	-6.0
2	18	12.0	6.0
Total	24		

Table 117

Test Statistics: Use of Whole Class Discussion to Address Mental Abilities

	Mental Abilities Whole Class Disc.
Chi-Square	6.000
df	1
Asymp. Sig.	.014

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Eighteen respondents (75%) used whole Class discussions to address mental abilities. Six faculty members (25%) did not use whole Class discussions. Table 117 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .014 level. Therefore, the null hypothesis is rejected.

Table 118

Frequency Percentages of Use of Small Group or Cooperative Group Discussion to Address Mental Abilities

	Observed N	Expected N	Residual
1	9	12.0	-3.0
2	15	12.0	3.0
Total	24		

Table 119

Test Statistics: Use of Small Group or Cooperative Group Discussion to Address Mental Abilities

	Mental Abilities Small or Coop. Grp. Discussion
Chi-Square	1.500
df	1
Asymp. Sig.	.221

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 118 illustrates that fifteen faculty members (62.5%) do use small group or cooperative group discussion when addressing mental abilities. While nine respondents (37.5%) stated that they did not use this strategy. Table 119 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .221 level. Therefore, the null hypothesis is accepted.

Table 120

Frequency Percentages of Use of Student Research Presentations to Address Mental Abilities

	Observed N	Expected N	Residual
1	16	12.0	4.0
2	8	12.0	-4.0
Total	24		

Table 121

Test Statistics: Use of Student Research Presentations to Address Mental Abilities

	Mental Abilities Student Research Pres.
Chi-Square	2.667
df	1
Asymp. Sig.	.102

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 120 illustrates eight respondents (33.3%) selected "Yes" they used student research presentations to address mental abilities. Sixteen faculty members (66.6%) selected "No" to using student research presentations to address mental abilities. Table 121 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .102 level. Therefore, the null hypothesis is accepted.

Table 122

Frequency Percentages of Use of In-Class Formal Activities to Address Mental Abilities

	Observed N	Expected N	Residual
1	15	12.0	3.0
2	9	12.0	-3.0
Total	24		

Table 123

Test Statistics: Use of In-Class Formal Activities to Address Mental Abilities

	Mental Abilities In-Class Formal Act.
Chi-Square	1.500
df	1
Asymp. Sig.	.221

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Fifteen respondents (62.5%) do not use in-class formal activities to address mental abilities. Nine faculty members used in-class formal activities. Table 123 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .221 level. Therefore, the null hypothesis is accepted.

Table 124

Frequency Percentages of Use of Games and Simulations to Address Mental Abilities

	Observed N	Expected N	Residual
1	21	12.0	9.0
2	3	12.0	-9.0
Total	24		

Table 125

Test Statistics: Use of Games and Simulations to Address Mental Abilities

	Mental Abilities Games and Sim.
Chi-Square	13.500
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 124 illustrates twenty-one respondents (87.5%) do not use games or simulations when addressing mental abilities. Three faculty members (12.5%) used games and simulations. Table 125 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 126

Frequency Percentages of Use of Journals to Address Mental Abilities

	Observed N	Expected N	Residual
1	18	12.0	6.0
2	6	12.0	-6.0
Total	24		

Table 127

Test Statistics: Use of Journals to Address Mental Abilities

	Mental Abilities Journal
Chi-Square	6.000
df	1
Asymp. Sig.	.014

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Eighteen respondents (75%) did not use journals to address mental abilities. Six faculty members (25%) did use journals to address mental abilities.

Table 127 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .014 level. Therefore, the null hypothesis is rejected.

Table 128

Frequency Percentages of Use of Outside Assignments to Address Mental Abilities

	Observed N	Expected N	Residual
1	16	12.0	4.0
2	8	12.0	-4.0
Total	24		

Table 129

Test Statistics: Use of Outside Assignments to Address Mental Abilities

	Mental Abilities Outside Assignments
Chi-Square	2.667
df	1
Asymp. Sig.	.102

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 128 illustrates sixteen respondents (66.7%) do not use outside assignments to address mental abilities. Eight faculty members (33.3%) do use this strategy. Table 129 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .102 level. Therefore, the null hypothesis is accepted.

Table 130

Frequency Percentages of Use of Does Not Apply to Address Mental Abilities

	Observed N	Expected N	Residual
1	23	12.0	11.0
2	1	12.0	-11.0
Total	24		

Table 131

Test Statistics: Use of Does Not Apply to Address Mental Abilities

	Mental Abilities Does Not Apply
Chi-Square	20.167
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-three respondents (95.8%) stated "no" to does not apply in relation to mental abilities. One respondent (4.2%) stated that mental abilities do not apply to their teacher education course. Table 131 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Sexual Orientation

Table 132

Frequency Percentages of Use of Lecture to Address Sexual Orientation

	Observed N	Expected N	Residual
1	15	12.0	3.0
2	9	12.0	-3.0
Total	24		

Table 133

Test Statistics: Use of Lecture to Address Sexual Orientation

	Sexual Orientation Lecture
Chi-Square	1.500
df	1
Asymp. Sig.	.221

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 132 illustrates that fifteen respondents (62.5%) do not use lectures to address sexual orientation. Nine faculty members (37.5%) do use lectures when addressing sexual orientation. Table 133 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .221 level. Therefore, the null hypothesis is accepted.

Table 134

Frequency Percentages of Use of Whole Class Discussion to Address Sexual Orientation

	Observed N	Expected N	Residual
1	11	12.0	-1.0
2	13	12.0	1.0
Total	24		

Table 135

Test Statistics: Use of Whole Class Discussion to Address Sexual Orientation

	Sexual Orientation Whole Class Disc.
Chi-Square	.167
df	1
Asymp. Sig.	.683

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Thirteen respondents (54.2%) use whole Class discussion to address sexual orientation. Eleven faculty members (45.8%) do not use whole class discussion. Table 135 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .683 level. Therefore, the null hypothesis is accepted.

Table 136

Frequency Percentages of Use of Small Group or Cooperative Group Discussion to Address Sexual Orientation

	Observed N	Expected N	Residual
1	19	12.0	7.0
2	5	12.0	-7.0
Total	24		

Table 137

Test Statistics: Use of Small Group or Cooperative Group Discussion to Address Sexual Orientation

	Sexual Orientation Small or Coop. Grp. Discussion
Chi-Square	8.167
df	1
Asymp. Sig.	.004

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 136 illustrates nineteen respondents (79.2%) do not use small group or cooperative group discussion to address sexual orientation. Five faculty members (20.8%) do use small group or cooperative group discussion. Table 137 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .004 level. Therefore, the null hypothesis is rejected.

Table 138

Frequency Percentages of Use of Student Research Presentations to Address Sexual Orientation

	Observed N	Expected N	Residual
1	21	12.0	9.0
2	3	12.0	-9.0
Total	24		

Table 139

Test Statistics: Use of Student Research Presentations to Address Sexual Orientation

	Sexual Orientation Student Research Pres.
Chi-Square	13.500
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-one faculty members (91.7%) do not use student research presentations to address sexual orientation. Three respondents (12.5%) selected "yes" to using student research presentations to address sexual orientation. Table 139 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 140

Frequency Percentages of Use of In-Class Formal Activities to Address Sexual Orientation

	Observed N	Expected N	Residual
1	21	12.0	9.0
2	3	12.0	-9.0
Total	24		

Table 141

Test Statistics: Use of In-Class Formal Activities to Address Sexual Orientation

	SEX O INCL
Chi-Square	13.500
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-one respondents (91.7%) do not use in-class formal activities to address sexual orientation. Three faculty members (12.5%) do use in-class formal activities to address sexual orientation. Table 141 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 142

Frequency Percentages of Use of Games and Simulations to Address Sexual Orientation

	Observed N	Expected N	Residual
1	23	12.0	11.0
2	1	12.0	-11.0
Total	24		

Table 143

Test Statistics: Use of Games and Simulations to Address Sexual Orientation

	Sexual Orientation Games and Sim.
Chi-Square	20.167
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 142 illustrates twenty-three respondents (95.8%) do not use games or simulations to address sexual orientation. One faculty member (4.2%) does use games and simulations to address sexual orientation. Table 143 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 144

Frequency Percentages of Use of Journals to Address Sexual Orientation

	Observed N	Expected N	Residual
1	21	12.0	9.0
2	3	12.0	-9.0
Total	24		

Table 145

Test Statistics: Use of Journals to Address Sexual Orientation

	Sexual Orientation Journal
Chi-Square	13.500
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-one respondents (87.5%) do not use journals to address sexual orientation. Three faculty members (12.5%) do use journals. Table 145 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 146

Frequency Percentages of Use of Outside Assignments to Address Sexual Orientation

	Observed N	Expected N	Residual
1	20	12.0	8.0
2	4	12.0	-8.0
Total	24		

Table 147

Test Statistics: Use of Outside Assignments to Address Sexual Orientation

	Sexual Orientation Outside Assign.
Chi-Square	10.667
df	1
Asymp. Sig.	.001

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty faculty members (83.3%) do not use outside assignments to address sexual orientation. Four respondents (16.7%) selected "yes" to using outside assignments to address sexual orientation. Table 147 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .001 level. Therefore, the null hypothesis is rejected.

Table 148

Frequency Percentages of Use of Does Not Apply to Address Sexual Orientation

	Observed N	Expected N	Residual
1	17	12.0	5.0
2	7	12.0	-5.0
Total	24		

Table 149

Test Statistics: Use of Does Not Apply to Address Sexual Orientation

	Sexual Orientation Does Not Apply
Chi-Square	4.167
df	1
Asymp. Sig.	.041

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Seventeen respondents (70.8%) selected "no" to does not apply in relation to sexual orientation. Seven faculty members (29.2%) selected does not apply to their teacher education courses. Table 149 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .041 level. Therefore, the null hypothesis is rejected.

Education Level

Table 150

Frequency Percentages of Use of Lectures to Address Education Level

	Observed N	Expected N	Residual
1	13	12.0	1.0
2	11	12.0	-1.0
Total	24		

Table 151

Test Statistics: Use of Lectures to Address Education Level

	Education Lecture
Chi-Square	.167
df	1
Asymp. Sig.	.683

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 150 illustrates thirteen faculty members (54.2%) do not use lectures to address education level. Eleven respondents (45.8%) do use lectures to address education level. Table 151 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .683 level. Therefore, the null hypothesis is accepted.

Table 152

Frequency Percentages of Use of Whole Class Discussion to Address Education Level

	Observed N	Expected N	Residual
1	8	12.0	-4.0
2	16	12.0	4.0
Total	24		

Table 153

Test Statistics: Use of Whole Class Discussion to Address Education Level

	Education Whole Class Disc.
Chi-Square	2.667
df	1
Asymp. Sig.	.102

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Sixteen respondents (66.7%) do use whole class discussion to address education level. Eight faculty members (33.3%) do not use whole Class discussion. Table 153 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .102 level. Therefore, the null hypothesis is accepted.

Table 154

Frequency Percentages of Use of Small Group or Cooperative Group Discussion to Address Education Level

	Observed N	Expected N	Residual
1	18	12.0	6.0
2	6	12.0	-6.0
Total	24		

Table 155

Test Statistics: Use of Small Group or Cooperative Group Discussion to Address Education Level

	Education Small or Coop. Grp. Discuss.
Chi-Square	6.000
df	1
Asymp. Sig.	.014

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 154 illustrates eighteen faculty members (75%) do not use small group or cooperative group discussion to address education level. Six respondents do use small group or cooperative group discussion. Table 155 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .014 level. Therefore, the null hypothesis is rejected.

Table 156

Frequency Percentages of Use of Student Research Presentations to Address Education Level

	Observed N	Expected N	Residual
1	19	12.0	7.0
2	5	12.0	-7.0
Total	24		

Table 157

Test Statistics: Use of Student Research Presentations to Address Education Level

	Education Student Research Pres.
Chi-Square	8.167
df	1
Asymp. Sig.	.004

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Nineteen respondents (79.2%) do not use student research presentations to address education level. Five faculty members (20.8%) do use research presentations to address education level. Table 157 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .004 level. Therefore, the null hypothesis is rejected.

Table 158

Frequency Percentages of Use of In-Class Formal Activities to Address Education Level

	Observed N	Expected N	Residual
1	21	12.0	9.0
2	3	12.0	-9.0
Total	24		

Table 159

Test Statistics: Use of In-Class Formal Activities to Address Education Level

	Education In-Class Formal Act.
Chi-Square	13.500
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-one respondents (87.5%) do not use in-class formal activities to address education level. Three faculty members (12.5%) do use in-class formal activities to address education level. Table 159 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 160

Frequency Percentages of Use of Games and Simulations to Address Education Level

E	Observed N	Expected N	Residual
1	23	12.0	11.0
2	1	12.0	-11.0
Total	24		

Table 161

Test Statistics: Use of Games and Simulations to Address Education Level

	Education Games and Sim.
Chi-Square	20.167
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-three faculty members (95.8%) did not use games and simulations to address education level. One respondent used games and simulations to address education level. Table 161 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 162

Frequency Percentages of Use of Journals to Address Education Level

	Observed N	Expected N	Residual
1	21	12.0	9.0
2	3	12.0	-9.0
Total	24		

Table 163

Test Statistics: Use of Journals to Address Education Level

	Education Journal
Chi-Square	13.500
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 162 illustrates twenty-one respondents (87.5%) do not use journals to address education level. Three faculty members (12.5%) do use journals to address education level. Table 163 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 164

Frequency Percentages of Use of Outside Assignments to Address Education Level

	Observed N	Expected N	Residual
1	20	12.0	8.0
2	4	12.0	-8.0
Total	24		

Table 165

Test Statistics: Use of Outside Assignments to Address Education Level

	Education Outside Assignments
Chi-Square	10.667
df	1
Asymp. Sig.	.001

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty faculty members (83.3%) do not use outside assignments to address education level. Four respondents (16.7%) do use outside assignments. Table 165 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .001 level. Therefore, the null hypothesis is rejected.

Table 166

Frequency Percentages of Use of Does Not Apply to Address Education Level

	Observed N	Expected N	Residual
1	21	12.0	9.0
2	3	12.0	-9.0
Total	24		

Table 167

Test Statistics: Use of Does Not Apply to address Education Level

	Education Does Not Apply
Chi-Square	13.500
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-one respondents (87.5%) selected "no" to does not apply in relation to education level. Four faculty members selected "yes" to does not apply in relation to education level. Table 167 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Language

Table 168

Frequency Percentages of Use of Lectures to Address Language

	Observed N	Expected N	Residual
1	11	12.0	-1.0
2	13	12.0	1.0
Total	24		

Table 169

Test Statistics: Use of Lectures to Address Language

	Language Lecture
Chi-Square	.167
df	1
Asymp. Sig.	.683

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 168 illustrates thirteen respondents (54.2%) do use lectures to address language in teacher education courses. Eleven faculty members (45.8%) do not use lectures to address language. Table 169 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .683 level. Therefore, the null hypothesis is accepted.

Table 170

Frequency Percentages of Use of Whole Class Discussion to Address Language

	Observed N	Expected N	Residual
1	4	12.0	-8.0
2	20	12.0	8.0
Total	24		

Table 171

Test Statistics: Use of Whole Class Discussion to Address Language

	Language Whole Class Discuss
Chi-Square	10.667
df	1
Asymp. Sig.	.001

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty respondents (83.3%) do use whole Class discussion to address language. Four faculty members (16.7%) do not use whole Class discussion to address language. Table 171 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .001 level. Therefore, the null hypothesis is rejected.

Table 172

Frequency Percentages of Use of Small Group or Cooperative Group Discussion to Address Language

	Observed N	Expected N	Residual
1	15	12.0	3.0
2	9	12.0	-3.0
Total	24		

Table 173

Test Statistics: Use of Small Group or Cooperative Group Discussion to Address Language

	Language Small or Coop. Grp. Discuss
Chi-Square	1.500
df	1
Asymp. Sig.	.221

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Fifteen faculty members (62.5%) do not use small group or cooperative group discussion to address language. Nine respondents (37.5%) do use small group or cooperative group discussion. Table 173 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .221 level. Therefore, the null hypothesis is accepted.

Table 174

Frequency Percentages of Use of Student Research Presentations to Address Language

	Observed N	Expected N	Residual
1	15	12.0	3.0
2	9	12.0	-3.0
Total	24		

Table 175

Test Statistics: Use of Student Research Presentations to Address

	Language Student Research Pres.
Chi-Square	1.500
df	1
Asymp. Sig.	.221

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 174 illustrates fifteen respondents (62.5%) do not use student research presentations to address language. Nine faculty members (37.5%) do use student research presentations. Table 175 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .221 level. Therefore, the null hypothesis is accepted.

Table 176

Frequency Percentages of Use of In-Class Formal Activities to Address Language

	Observed N	Expected N	Residual
1	15	12.0	3.0
2	9	12.0	-3.0
Total	24		

Table 177

Test Statistics: Use of In-Class Formal Activities to Address Language

	Language In-Class Formal Act.
Chi-Square	1.500
df	1
Asymp. Sig.	.221

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Fifteen respondents (62.5%) do not use in-class formal activities to address language. Nine faculty members (37.5%) do use in-class formal activities. Table 177 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .221 level. Therefore, the null hypothesis is accepted.

Table 178

Frequency Percentages of Use of Games and Simulations to Address Language

	Observed N	Expected N	Residual
1	21	12.0	9.0
2	3	12.0	-9.0
Total	24		

Table 179

Test Statistics: Use of Games and Simulations to Address Language

	Language Games and Sim.
Chi-Square	13.500
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-one faculty members (87.5%) do not use games or simulations to address language. Three respondents (12.5%) do use games and simulations. Table 179 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 180

Frequency Percentages of Use of Journals to Address Language

	Observed N	Expected N	Residual
1	20	12.0	8.0
2	4	12.0	-8.0
Total	24		

Table 181

Test Statistics: Use of Journals to Address Language

	Language Journal
Chi-Square	10.667
df	1
Asymp. Sig.	.001

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 180 illustrates twenty faculty members (83.3%) do not use journals to address language. Four respondents (16.7%) do use journals to address language. Table 181 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .001 level. Therefore, the null hypothesis is rejected.

Table 182

Frequency Percentages of Use of Outside Assignments to Address Language

	Observed N	Expected N	Residual
1	17	12.0	5.0
2	7	12.0	-5.0
Total	24		

Table 183

Test Statistics: Use of Outside Assignments to Address Language

	Language Outside Assignments
Chi-Square	4.167
df	1
Asymp. Sig.	.041

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Seventeen respondents (70.8%) did not use outside assignments to address language. Seven faculty members (29.2%) did use outside assignments. Table 183 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .041 level. Therefore, the null hypothesis is rejected.

Table 184

Frequency Percentages of Use of Does Not Apply to Address Language

	Observed N	Expected N	Residual
1	24	24.0	.0
Total	24		

This variable is constant. Chi-Square Test cannot be performed.

All respondents (100%) selected "no" to does it not apply.

Religion

Table 185

Frequency Percentages of Use of Lectures to Address Religion

	Observed N	Expected N	Residual
1	16	12.0	4.0
2	8	12.0	-4.0
Total	24		

Table 186

Test Statistics: Use of Lectures to Address Religion

	Religion Lecture
Chi-Square	2.667
df	1
Asymp. Sig.	.102

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 185 illustrates sixteen faculty members (66.7%) did not use lectures to address religion in a teacher education course. Eight faculty members (33.3%) did use lectures to address religion. Table 186 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .102 level. Therefore, the null hypothesis is accepted.

Table 187

Frequency Percentages of Use of Whole Class Discussion to Address Religion

	Observed N	Expected N	Residual
1	12	12.0	.0
2	12	12.0	.0
Total	24		

Table 188

Test Statistics: Use of Whole Class Discussion to Address Religion

	Religion Whole Class Discuss
Chi-Square	.000
df	1
Asymp. Sig.	1.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twelve respondents (50%) did not use whole Class discussion to address religion. Twelve teacher education faculty members did use whole Class discussion. Table 188 illustrates the Chi-Square Goodness of Fit test reported significant differences at the 1.000 level. Therefore, the null hypothesis is accepted.

Table 189

Frequency Percentages of Use of Small Group or Cooperative Group Discussion to Address Religion

	Observed N	Expected N	Residual
1	19	12.0	7.0
2	5	12.0	-7.0
Total	24		

Table 190

Test Statistics: Use of Small Group or Cooperative Group Discussion to Address Religion

	Religion Small or Coop. Grp. Discuss
Chi-Square	8.167
df	1
Asymp. Sig.	.004

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Nineteen faculty members (79.2%) did not use small group or cooperative group discussion to address religion. Five respondents (20.8%) did use small group or cooperative group discussion. Table 190 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .004 level. Therefore, the null hypothesis is rejected.

Table 191

Frequency Percentages of Use of Student Research Presentations to Address Religion

	Observed N	Expected N	Residual
1	19	12.0	7.0

2	5	12.0	-7.0
Total	24		

Table 192

Test Statistics: Use of Student Research Presentations to Address Religion

	Religion Student Research Pres.
Chi-Square	8.167
df	1
Asymp. Sig.	.004

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 191 illustrates nineteen respondents (79.2%) did not use student research presentations to address religion. Five faculty members (20.8%) did use student research presentations. Table 192 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .004 level. Therefore, the null hypothesis is rejected.

Table 193

Frequency Percentages of Use of In-Class Formal Activities to Address Religion

	Observed N	Expected N	Residual
1	21	12.0	9.0
2	3	12.0	-9.0
Total	24		

Table 194

Test Statistics: Use of In-Class Formal Activities to Address Religion

	Religion In-Class Formal Activities
Chi-Square	13.500
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-one respondents (87.5%) did not use in-class formal activities to address religion. Three faculty members (12.5%) did use in-class formal activities. Table 194 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 195

Frequency Percentages of Use of Games and Simulations to Address Religion

	Observed N	Expected N	Residual
1	24	24.0	.0
Total	24		

This variable is constant. Chi-Square Test cannot be performed.

All twenty-four respondents (100%) did not use games and simulations to address religion.

Table 196

Frequency Percentages of Use of Journals to Address Religion

	Observed N	Expected N	Residual
1	22	12.0	10.0
2	2	12.0	-10.0
Total	24		

Table 197

Test Statistics: Use of Journals to Address Religion

	Religion Journal
Chi-Square	16.667
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-two respondents (91.7%) did not use journals to address religion. Two faculty members (8.3%) did use journals to address religion. Table 197 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 198

Frequency Percentages of Use of Outside Assignments to Address Religion

	Observed N	Expected N	Residual
1	21	12.0	9.0
2	3	12.0	-9.0
Total	24		

Table 199

Test Statistics: Use of Outside Assignments to Address Religion

	Religion Outside Assignments
Chi-Square	13.500
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-one faculty members (87.5%) did not use outside assignments to address religion. Three respondents (12.5%) did use outside assignments. Table 199 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 200

Frequency Percentages of Use of Does Not Apply to Address Religion

	Observed N	Expected N	Residual
1	17	12.0	5.0
2	7	12.0	-5.0
Total	24		

Table 201

Test Statistics: Use of Does Not Apply to Address Religion

	Religion Does Not Apply
Chi-Square	4.167
df	1
Asymp. Sig.	.041

a 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Seventeen respondents (70.8%) selected "no" to does not apply. Seven faculty members (29.2%) found religion to not apply to their teacher education courses. Table 201 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .041 level. Therefore, the null hypothesis is rejected.

Socio-Economic-Status

Table 202

Frequency Percentages of Use of Lectures to Address Socio-Economic-Status

	Observed N	Expected N	Residual
1	9	12.0	-3.0
2	15	12.0	3.0
Total	24		

Table 203

Test Statistics: Use of Lectures to Address Socio-Economic-Status

	Socio-Economic-Status Lecture
Chi-Square	1.500
df	1
Asymp. Sig.	.221

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Fifteen respondents (62.5%) used lectures to address socio-economic-status. Nine faculty members (37.5%) did not use lectures to address socio-economic-status. Table 203 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .221 level. Therefore, the null hypothesis is accepted.

Table 204

Frequency Percentages of Use of Whole Class Discussions to Address Socio-Economic-Status

	Observed N	Expected N	Residual
1	4	12.0	-8.0
2	20	12.0	8.0
Total	24		

Table 205

Test Statistics: Use of Whole Class Discussions to Address

	Socio-Economic-Status Whole Class Disc.
Chi-Square	10.667
df	1
Asymp. Sig.	.001

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 204 illustrates twenty respondents (83.3%) used whole Class discussions to address socio-economic-status. Four faculty members (16.7%) did not use whole Class discussion to address socio-economic-status. Table 205

illustrates the Chi-Square Goodness of Fit test reported significant differences at the .001 level. Therefore, the null hypothesis is rejected.

Table 206

Frequency Percentages of Use of Small Group or Cooperative Group Discussion to Address Socio-Economic-Status

	Observed N	Expected N	Residual
1	10	12.0	-2.0
2	14	12.0	2.0
Total	24		

Table 207

Test Statistics: Use of Small Group or Cooperative Group Discussion to Address Socio-Economic-Status

	Socio-Economic-Status Small or Coop. Grp. Discuss
Chi-Square	.667
df	1
Asymp. Sig.	.414

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Fourteen respondents (58.3%) used small group or cooperative group discussion to address socio-economic-status. Ten faculty members (41.6%) did not use small group or cooperative group discussion. Table 207 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .414 level. Therefore, the null hypothesis is accepted.

Table 208

Frequency Percentages of Use of Student Research Presentations to Address Socio-Economic-Status

	Observed N	Expected N	Residual
1	13	12.0	1.0
2	11	12.0	-1.0
Total	24		

Table 209

Test Statistics: Use of Student Research Presentations to Address Socio-Economic-Status

	Socio-Economic-Status Student Research Pres.
Chi-Square	.167
df	1
Asymp. Sig.	.683

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Thirteen faculty members (54.2%) do not use student research presentations to address socio-economic-status. Eleven respondents (45.8%) did use student research presentations. Table 209 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .683 level. Therefore, the null hypothesis is accepted.

Table 210

Frequency Percentages of Use of In-Class Formal Activities to Address Socio-Economic-Status

	Observed N	Expected N	Residual
1	16	12.0	4.0
2	8	12.0	-4.0
Total	24		

Table 211

Test Statistics: Use of In-Class Formal Activities to Address Socio-Economic-Status

	Socio-Economic-Status In-Class Formal Act.
Chi-Square	2.667
df	1
Asymp. Sig.	.102

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Sixteen faculty members (66.7%) did not use in-class formal activities to address socio-economic-status. Eight respondents (33.3%) did use in-class formal activities. Table 211 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .102 level. Therefore, the null hypothesis is accepted.

Table 212

Frequency Percentages of Use of Games and Simulations to Address Socio-Economic-Status

	Observed N	Expected N	Residual
1	23	12.0	11.0
2	1	12.0	-11.0
Total	24		

Table 213

Test Statistics: Use of Games and Simulations to Address Socio-Economic-Status

	Socio-Economic-Status Games and Sim.
Chi-Square	20.167
df	1
Asymp. Sig.	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Twenty-three respondents (95.8%) did not use games and simulations to address socio-economic-status. One faculty member (4.2%) did use games and simulations. Table 213 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .000 level. Therefore, the null hypothesis is rejected.

Table 214

Frequency Percentages of Use of Journals to Address Socio-Economic-Status

	Observed N	Expected N	Residual
1	19	12.0	7.0
2	5	12.0	-7.0
Total	24		

Table 215

Test Statistics: Use of Journals to Address Socio-Economic-Status

	Socio-Economic-Status Journal
Chi-Square	8.167
df	1
Asymp. Sig.	.004

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Nineteen respondents (79.2%) did not use journals to address socio-economic-status. Five faculty members (20.8%) did use journals to address socio-economic-status. Table 215 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .004 level. Therefore, the null hypothesis is rejected.

Table 216

Frequency Percentages of Use of Outside Assignments to Address Socio-Economic-Status

	Observed N	Expected N	Residual
1	16	12.0	4.0
2	8	12.0	-4.0
Total	24		

Table 217

Test Statistics: Use of Outside Assignments to Address Socio-Economic-Status

	Socio-Economic-Status Outside Assignments
Chi-Square	2.667
df	1
Asymp. Sig.	.102

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

Table 216 illustrates sixteen faculty members (66.7%) do not use outside assignments to address socio-economic-status. Eight respondents (33.3%) did use outside assignments to address socio-economic-status. Table 217 illustrates the Chi-Square Goodness of Fit test reported significant differences at the .102 level. Therefore, the null hypothesis is accepted.

Table 218

Frequency Percentages of Use of Does Not Apply to Address Socio-Economic-Status

	Observed N	Expected N	Residual
1	24	24.0	.0
Total	24		

This variable is constant. Chi-Square Test cannot be performed.

All twenty-four respondents (100%) selected "no" to does not apply in relation to socio-economic-status in their teacher education courses.

Qualitative Analysis

Identification of Emerging Themes

In addition to the quantitative data that have been reported in the preceding sections of Chapter Four, qualitative data was gathered from the survey to give depth to the survey and insight into trends in diversity education. Two open-ended questions were asked in an attempt to gather information about how teacher education faculty deal with students who reject the acceptance of diverse students and issues and professional development opportunities in the area of diversity education. To identify repeating and emerging themes, the researcher followed the coding strategy of looking for key words. Those words could then be categorized and combined into a larger theme.

Question 18 asked for a qualitative response to the following question: *"How do you manage a student who rejects the acceptance of all students*

regardless of their characteristics of difference?" Twenty-three faculty members (95.8%) responded to the question. The majority (50%) of the answers wanted to encourage students to practice empathy with individuals and redirect to them personally. Participant 21 offered the following insight: "Reason with them, I try to help them think about the implications of their narrow views, and I try to help them develop empathy."

Discussion was also encouraged by twelve respondents (50%). Participant 5 offered this suggestion "Open (and often difficult) discussion in class. Not rejecting the student, but not allowing them to reject others either." This participant also emphasized that the student should not be rejected; this is key if teachers are trying to accept everyone. The following statements are representative of comments made by respondents to the survey's question in the previous category:

Participant 8:

> You have to accept that different people have different perceptions of others – I try to ask questions, and often make sure [everyone] (including myself) have opportunities to share so that a student such as the one described can hear multiple views. Sometimes I believe it is a result of lack of knowledge-not having personal experience with someone who is different from them.

Participant 2:

Allow for personal beliefs but must be able to address the best interests of the students he/she will be teaching.

Participant 15:

I generally allow them to express their opinion and open up the class to discussion.

Question 19 asked for a qualitative response to the following question "*What types of professional development have you engaged in to increase your knowledge about characteristics of difference?*" Twenty-two faculty members (91.6%) responded to the question. The two most common responses for what type of professional development was reading about diversity or attending a conference with ten respondents (41.6%) offering these answers. Participant 16 offered "professional reading, professional research, [and] academic dialogue." While participant 22 stated "Ethnic and racial training session (all-day Saturday_ Iowa Culture and Language Conference 2006 Teacher Quality Enhancement Grant Program for Iowa)". Workshops and training sessions were mentioned by eight respondents (24%). Seven faculty members (29.2%) wrote about having discussion with others. Fiver respondents (20.8%) wrote about being on research teams or grant teams.

Participant 15

College-wide diversity workshops, personal reading and discussions with colleagues

Participant 3

National, regional, and local conferences as both a presenter and participant. I am a voracious reader. I am on research teams that look at these kinds of issues.

In conclusion, the qualitative data indicates that many faculty members participating in the study had opportunities to discuss characteristics of difference with their colleagues and attend conferences and workshops. In relating to students that do not agree with characteristics of difference, the respondents tried to make the students understand their professional obligations and created a climate where everyone was welcome and accepted.

Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

With the immigration of European populations to the Americas in the fifteenth century, diversity was introduced to the area now known as the United States. In time, public education was established to promote a common and democratic society and as well as give individuals the chance to learn and succeed in the world. Today, the population of the United States continues to change, and schools must again adjust to meet the challenge of educating a diverse body of students. This challenge is shared by Teacher Education Programs as the faculty of these programs must look within to identify what characteristics of difference are addressed and how they are addressed.

The purpose of this study is twofold: to identify what characteristics of difference are addressed in teacher education classrooms by faculty members from three teacher education programs in the Midwest, and to examine how these Teacher Education Faculty incorporated the characteristics of difference into instructional strategies, formal in-class activities, or outside classroom assignments. This study also asked participants to provide insight into what diversity professional development they had participated in. Along with professional development, Teacher Education Faculty offered advice on how they managed classroom students who did not believe in diversity.

Summary of the Findings

Demographics

This study found the following demographic variables helpful in describing the study's Teacher Education Faculty sample.

Rank

Twenty-nine percent (29%) of the Teacher Education Faculty, self-reported that their teaching ranks was that of "Full Professor." Nine respondents, or thirty-seven percent (37%) of the sample, reported their rank as that of "Associate Professor," seven, or twenty-nine percent (29%) of the Teacher Education Faculty, reported their rank as that of "Assistant Professor," and one, or four percent (4%) reported their rank as "Instructor." Therefore, a total of over sixty-six percent (66%) of the faculty sample were at the Associate Professor level or higher.

Teaching Experience

The mean score for *Years of Teaching Experience* was relatively high (M= 10.5). In summarizing the data for this demographic characteristic, the least amount of teaching experience reported was two years, and the most teaching experience was reported as thirty years. Seventy-one percent (71%) of the sample had taught 10 years or more in higher education. The conclusion, then, is that the Teacher Education Faculty members who responded are highly experienced teachers. However, this study does not equate experienced teaching with quality teachers as that was beyond the scope of this research.

Tenure

Tenure generally follows for those with teaching experience and rank beyond Assistant Professor. In this study, sixty-two percent (62.5%) reported that they were tenured. This would parallel the high numbers of years of teaching experience. Twenty-nine percent (29%) of the Teacher Education Faculty members reported nine or less years of higher education teaching experience.

Age

Eight respondents (34.8%) self reported their age between 34 and 45 years. Six Teacher Education Faculty (26%) members reported their age between 46 and 55 years. Seven faculty members (30.4%) reported their age was between 56 and 63 years. The age of the faculty sample was relatively mature with thirteen respondents (56.4%) reporting their ages as 46 or older.

Sex

Of the twenty-four respondents, 79.2% were female and 20.8% were male. These results relate to the percentage of females associated with K-12 education, in 1999, 87% of elementary and secondary school teachers were Caucasian, female, and from the middle socioeconomic class (Cruz and Patterson, 2005).

Race

Seventy-nine percent reported their race as Caucasian, while more than twelve percent report their race as African-American, and one Teacher Education Faculty member reported their race as Caucasian-Hispanic. In conclusion, this

sample is representative of the national statistics of National Education Association (NEA) found in 2001, 90% of public teachers were White and only 6% were Black (National Education Association, 2003).

Characteristics of Difference Taught

Twelve characteristics of difference were identified from the literature review for use in this research study. When respondents were asked to identify which characteristics of difference they addressed in their teacher education courses, the results were mixed. The characteristics of difference that were identified most often as "Strongly Agree," (they were addressed in a teacher education course) were gender and mental abilities. These two characteristics may be seen as standard characteristics of difference because of media coverage of gender differences and sensitivity developed in special education courses. The characteristics of difference most often identified with "Agree" were race and ethnicity. Race and ethnicity did not have any respondent select lower than "Agree." These two characteristics of difference are most often included in diversity courses (Simoni et al., 1999), and most often the first two that are connected to diversity (Morrison, Lumby and Sood, 2006).

The characteristics of difference most often identified with "Disagree" were sexual orientation and age. Age, as defined by this research study, may be a unique concept to these participants since most individuals view age as dealing with the elderly. In addition, sexual orientation may be avoided due to conflicts in personal beliefs. This avoidance, however, can also be interpreted as permission

to discriminate: "Only 16.5% [students] reported that staff who were present when homophobic remarks were made intervened frequently when they heard such language. In fact, students reported that school staff were less likely to intervene regarding homophobic remarks and remarks about gender expression than racist or sexist remarks" (GLSEN, 2005, p. 4).

Addressing Characteristics of Difference

The majority of the respondents in this study used lecture to address race, ethnicity, gender, physical abilities, mental abilities, language, and socio-economic-status. In higher education, lecture has been labeled as the dominant type of teaching format (Gullatt, 2006). While lecture is effective in sharing knowledge quickly, it also places the teacher at the center and focuses the power in a classroom with the teacher. Since "pre-service teachers view teaching as the process of transmitting information to students as efficiently as possible" (Dart et al., 1998, p. 293), teacher education professors need to careful of the modeling that they are engaged in when teaching.

While lecture was important, whole classroom discussion was the most used strategy to address race, ethnicity, gender, sex, age, physical abilities, mental abilities, sexual orientation, education level, language, religion, and socio-economic-status --all of the characteristics of difference. Usually whole classroom discussion is teacher-led (Gullatt, 2006). Like lecture, teachers may feel more comfortable using this strategy because they have more control of the topic.

Even when students try to change the direction of the discussion, the teacher still has the power to allow or disallow any change.

Related to whole group discussion, small group or cooperative group discussion was used by the majority of the sample for the following characteristics of difference: race, ethnicity, gender, mental abilities, and socio-economic-status. Small group or cooperative group discussion should be student-led, so some teachers may not be comfortable using this instructional strategy for topics that could cause controversy.

The majority of respondents did not use student research presentations to address characteristics of difference. However, socio-economic-status was addressed by student research presentations by eleven faculty members. Generally, the purpose of a student research presentation is to allow students to select a topic of interest, research it, and present it to the class.

In-class formal activities to address characteristics were used by at least three or 12.5% of the teacher education professors. Fifty-four percent of the faculty used in-class formal activities to address race and ethnicity. Once again, race and ethnicity are the most common characteristics of difference and may enable the professor to be more comfortable addressing it with activities.

Games and simulations were not used by 50% of the teacher education faculty to address characteristics of difference. No teacher education faculty used games and simulations to address sex. Only two teachers used games and simulations to address ethnicity, while one faculty member used this strategy to

address gender. Two faculty members used games and simulations to address age, two address physical abilities, three addressed mental abilities and one teacher education faculty member used games and simulations to address sexual orientation. One faculty member addressed education level by using games and simulations, and three faculty members used games and simulations to address language. These instructional strategies are important because games and simulations allow students to take an active role in addressing characteristics of difference by allowing for more hands-on experience and a higher level of excitement (McLure, 1997). Simulations allowed students to experience the topic and relate it to their own prior experience (Meden, 1999).

Journaling is a great instructional strategy that allows students to reflect through writing. Yet, to address characteristics of difference, the majority of Teacher Education Faculty did not choose to use journals. "Journal writing has been found to be of positive value for students... [because] responsibility for learning belongs to the students, students are actively engaged in the reflective process and journal writing is a student centered approach" (O'Connell and Dyment, 2006, p. 674). Since pre-service teachers need to have a chance to reflect on their own worldview, it would be critical to include journals in addressing characteristics of difference. "'Reflection – in action' addresses the thought processes during an event and allows for modification of actions as they occur" (Dart et al., 1998, p. 294).

Likewise, teacher education faculty members did not choose to use outside formal activities to address characteristics of difference. Outside assignments may encourage students to discuss, research, and present topics or opinions that may be uncomfortable to the majority. This type of instructional strategy also often necessitates grading and feedback.

Professional development opportunities for Teacher Education Faculty were most often identified as reading about diversity or attending a conference. More professional development opportunities, both formal and informal, about the characteristics of difference and instructional strategies would enable Teacher Education Faculty to be more informed and comfortable in addressing these topics in the classroom using a variety of instructional strategy.

In regards to dealing with students who do not want to discuss or participate in anything having to deal with characteristics of difference, teacher education professors most often felt that they must allow him/her time to discuss opinions in class. Creating an environment in which everyone is welcome and valued was also a key concept offered by respondents.

Conclusions

This study revealed some good news and strong concerns. The good news is that many characteristics of difference are being addressed by the teacher education faculty who responded to the survey. The number of faculty from individual programs would also indicate that characteristics of difference are

not limited to one only course in those programs. However, not all characteristics of difference have the same attention. When only 79% of the respondents indicate that they address sexual orientation and 66% of the respondents indicate that they address religion, all educational stakeholders have reason for concern.

How characteristics of difference are being addressed in teacher education programs is also an area of concern for those who share a constructivist philosophy with an emphasis on active learning. While there are specific instructional strategies that are more widely used in the classroom, current performance-based strategies are designed to keep students actively engaged (McLure, 1997). Yet, lecture, whole classroom discussion, and small group or cooperative group discussion were the most widely used instructional strategies identified in this study to address the characteristics of difference. All of these instructional strategies include having the teacher as the center of knowledge with the exception of small group or cooperative group discussion. Allowing the student to become actively involved may enable students to relate and apply knowledge to prior experiences and knowledge, but these methods may also limit teacher control.

The instructional strategies that were typically avoided when addressing characteristics of difference are not unusual because these strategies are also avoided in other situations. "All too often, students are provided with an introduction to a topic (informing), often in class, and left to achieve the learning on their own with minimal structure and frequently no formative feedback"

(McAlpine, 2004, p. 128). In order to move beyond the traditional higher education strategies that focus on "tell and talk," change must occur with teacher education faculty and programs so that this change is modeled for pre service teachers who can, in turn, impact their own classrooms. Change occurs when pre-service teachers have experiences with diversity and the opportunity to reflect about values, beliefs, and their own personal experiences with the characteristics of difference. "What teachers think and believe shapes the way they understand teaching and the priorities they give to different dimensions of teaching" (Tsang, 2004, p. 164). From this perspective, reflective activities are a necessity to ensure teachers have the chance to analyze their own beliefs. "They [pre-service teachers] need to practice actually engaging in cultural critical consciousness and person reflection. This practice should involve concrete situations, guided assistance, and specific contexts and catalysts" (Gay and Kirkland, 2003, p. 187).

Implications and Recommendations

Having reported the results of this study, it is important to identify the implications of the results. The majority of the Teacher Education Faculty when addressing characteristics of difference avoided instructional strategies that were student-focused, but reported teacher-led, "tell and talk" instructional strategies most often. "Students in both pre- and in-service teacher education programs bring with them considerable informal knowledge of learning and teaching

processes, and of psychological concepts related to the classroom teaching and learning. Beliefs about learning and teaching drive all decisions to do with teaching" (Dart et al., 1998, p. 292). To create a classroom based on social constructivism, teacher education faculty need the training to promote a classroom climate in which learning occurs through social interaction. Through this modeling, pre-service teachers will see the importance of diversity training to create a classroom beneficial to all students. Teacher education faculty, then, must involve future teachers in active learning about the characteristics of difference (Brown, 2004).

To improve teacher education courses, faculty need to have training in both characteristics of difference and active instructional strategies. Professional development is one avenue in which faculty can learn these skills and also reflect on their own beliefs. However, professional development opportunities were mostly conversations with colleagues or attending conferences. Since most participants acknowledged their professional development as attending conferences, professional development must also occur within institutions.

Increasing support for addressing characteristics of difference and increasing active instructional strategies may be met through the following recommendations:

1. Characteristics of difference and active instructional strategies must be modeled and addressed in every pre-service teacher education course. Going beyond having a designated diversity course to integrating

characteristics of difference among all courses will encourage pre-service teachers to see the importance of including these issues in their own classrooms.

2. Teacher Education Faculty members should create curriculum maps of all of core teacher education courses in order to analyze where the characteristics of difference are being taught. After analyzing the curriculum maps, faculty members must address how all characteristics of difference can be covered in pre-service Teacher Education Programs. When characteristics of difference are identified as missing, it is crucial to establish what courses will integrate material about them and how they will be addressed.
3. Pre-service teachers should have more field experience that includes exposure to and interaction with diverse populations. These opportunities will allow pre-service teachers to become more comfortable with diverse populations and perhaps understand their culture and educational needs better.
4. Pre-service teachers should have reflective experiences wherein pre-service teachers are asked to analyze their own beliefs and dispositions about characters of difference and recognize their own embedded worldviews.
5. The number of minority teachers should be increased, and this status considered beyond race and ethnicity. Higher education institutions can

encourage minority teachers to pursue teacher education courses and licenses by offering support programs, both academically and socially. When a minority person ventures into a field in which is dominated by White females, it is crucial to have support (Banks et al., 2001).

6. Creating and maintaining a non-discrimination policy within schools is a necessity so that school environments are safe and all people within the school are respected and feel valued. Such policies should be reviewed yearly, posted, and enforced by all members of the institution.
7. Development of a mentoring program could offer support for the implementation of teaching about the characteristics of difference. Highly qualified and successful teachers and professors could be used as a mentor and model about "what works" when addressing characteristics of difference in an actual classroom.
8. Local and national professional development opportunities for teacher education faculty members are needed for those members to be enlightened and trained about the characteristics of difference and how to incorporate active instructional strategies. Without having professional development opportunities within each institution, not all professors will have the necessary knowledge about what and how to address characteristics of difference in their education classes. National conferences also need to be included in professional development plans as opportunities to both learn and network.

Directions for Future Research

This study identified what characteristics of differences were taught in pre-service education courses and what types of instructional strategies were used to address the characteristics of difference. The study did not attempt to observe first-hand the characteristics of difference actually taught. A larger sample would enable this study to be more generalizable, but the institution report is important for each individual institution as a needs assessment and review of how diversity is being addressed.

Research analyzing student perception of content and methods used would allow for a more in depth look into what characteristics of difference are actually being taught from a student's perspective.

In addition, studying actual teacher education faculty members' own perceptions and attitudes toward characteristics of difference would allow the researcher to view how perceptions and attitudes influence what is being taught. "Developing the ability to see beyond one's own perspective—to put oneself in the shoes of the learner and understand the meaning of that experience in terms of learning—is perhaps the most important role of teacher preparation" (Darling-Hammond, 2006, p. 234).

More specifics about the methods and assignments that the professors have used to address the characteristics of difference are critical to evaluating

the effects of addressing these characteristics of difference. Interviewing both professors and pre-service teachers would allow a researcher to determine what and more specifically, how the characteristics of difference were being addressed. Compiling actual instructional strategies and activities being used to address characteristics of difference would allow other instructors to gain insight into what works.

Teacher reflections need to also be studied because it would also allow for common themes to surface. A case study approach of successful teachers who address a wide-range of characteristics of difference would be enable a researcher to establish what it takes to be a culturally responsive as well as a highly qualified teacher. Along with studying culturally responsive teachers, the study of diverse students who are academically successful would help establish appropriate strategies in similar situations. In addition to studying teachers and students who have been successful, interviewing and observing teachers who have been in the field for five or more years would allow for a more in-depth needs assessment.

The world of education continues to change today, as does the population within schools. Teachers must be taught how to address a diverse population if all students are to become academically successful and achieve their personal potential. To that end, instructional strategies in teacher education programs must go beyond "telling and talking" to more student-involved activities in which students can reflect on their own perceptions, knowledge, and attitudes. The

challenge is within: teacher education programs must model and integrate dispositions and knowledge about characteristics of differences in order to graduate culturally responsive educators who can teach actively, relate to their students, and continue to learn.

REFERENCES

Adams, M., Bell, L. & Griffin, P. (1997). *Teaching for diversity and social justice: A sourcebook for teachers and trainers.* New York: Routeledge.

Adams, M. et al. (2000). *Readings for diversity and social justice: An anthology on racism, sexism, anti-semitism, heterosexism, classism, and ableism.* New York: Routeledge.

Ameny-Dixon, G. (2004). Why multicultural education is more important in higher education now than ever: A global perspective. *International Journal of Scholarly Academic Intellectual Diversity, 8*(1), 1-9.

Armour, M., Bain, B. & Rubio, R. (2004, Winter). An evaluation study of diversity training for field instructors: A collaborative approach to enhancing cultural competence. *Journal of Social Work Education, 40*(1), 27-38.

Atherton J. (2005) *Learning and teaching: Constructivism in learning.* Retrieved July 9, 2006 from http://www.learningandteaching.info/learning/constructivism.htm

Bakari, R. (2003). Preservice teachers' attitude toward teaching African American students. *Urban Education. 38*(6), 640-654.

Banks, J. (2005). *Multicultural education: Goals and dimensions.* Retrieved on July 6, 2005, from http://depts.washington.edu/centerme/view.htm.

Banks, J., Cookson, P., Gay, G., Hawley, W., Irvine, J., Nieto, S. et al. (2001). *Diversity within unity: Essential principles for teaching and learning in a multicultural society.* Seattle, WA: University of Washington, Seattle.

Bjorke, S. (2004). The concepts of communities of practice, activity theory and implications for distributed learning. *Arendal,* n.p.

Boyle-Baise, M. (2005). Preparing community-oriented teachers: Reflections from a multicultural service-learning project. *Journal of Teacher Education, 56*(5), 446-458.

Brown, E. (2004). What precipitates change in cultural diversity awareness during a multicultural course: The message or the method? *Journal of Teacher Education, 55*(4), 325-340.

Brown, M. et al. (2003). Secondary students' perceptions of school life with regard to alienation: The effects of disability, gender and race. *Learning Disability Quarterly, 26*, 227-238.

Bruner, J. (1996). *The culture of education.* Cambridge, MA: Harvard University Press

Burden, J., Hodge, S., O'Bryant, C. & Harrison, L. (2004). From colorblindness to intercultural sensitivity: Infusing diversity training in PETE programs. *Quest*, (56), 173-189.

Christal, M. (2003). Virtual museum project for culturally responsive teaching in American Indian education. Unpublished doctoral dissertation. The University of Texas at Austin, Austin, TX.

Cockrell, K., Placier, P., Cockrell, D. & Middleton, J. (1999). Coming to terms with "diversity" and "multiculturalism" in teacher education: Learning about our students, changing our practice. *Teaching and Teacher Education, 15,* 351-366.

Commins, N., & Miramontes, O. (2006). Addressing linguistic diversity from the outset. *Journal of Teacher Education, 57*(3), 240-246.

Cooper, J. (2005). A training programme based on the principles of social constructivism and focused on developing people for the future world of work: An evaluation. Unpublished master's thesis, University of Pretoria, Pretoria, South Africa.

Coster, W., & Haltiwanger, J. (2004). Social-behavioral skills of elementary students with physical disabilities included in general education classrooms. *Remedial and Special Education, 25*(2), 95-103.

Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches.* Thousand Oaks, CA: Sage.

Cruz, B., & Patterson, J. (2005). Cross-cultural simulations in teacher education: Developing empathy and understanding. *Multicultural Perspectives, 7*(2), 40-47.

Darling-Hammond, L. (2006). Powerful teacher education: Lessons from exemplary programs. New York: Jossey-Bass.

Dart, B., et al. (1998). Change in knowledge of learning and teaching through journal writing. *Research Papers in Education, 13*(3), 291-318.

Davis-Kean, P. (2005). The influence of parent education and family income on child achievement: The indirect role of parental expectations and the home environment. *Journal of Family Psychology, 19*(2), 294-204.

Dinero, S. (2004, December). The politics of education provision in rural Native Alaska: The case of Yukon Village. *Race, Ethnicity, and Education. 7*(4), 401-419.

Education Alliance at Brown University. (2005, December). *Culturally responsive teaching.* Retrieved December 21, 2005, from http://knowledgeloom.org/crt/

Eifler, K., Potthoff, D. & Dinsmore, J. (2004). A bucket of eels: A tripartite approach to renewing a teacher education program. *Journal of Teacher Education, 55*(1), 91-101.

Escamilla, K., & Nathenson-Mejia, S. (2003). Preparing culturally responsive teachers: Using Latino children's literature in teacher education. *Equity and Excellence in Education, 36*, 238-248.

Evans, C., Arnot-Hopffer, E. & Jurich, D. (2005), Making ends meet: Bringing bilingual education and mainstream students together in preservice teacher education. *Equity and Excellence to Education, 38*, 75-88.

Ference, R. & Bell, S. (2004) A cross-cultural immersion in the U.S.: Changing preservice teacher attitudes toward Latino ESOL students. *Equity and Excellence in Education, 37*, 343+350.

Furman, R., Jackson, R., Downey, E. & Shears, J. (2003). Social constructivist practice with youth. *Child and Adolescent Social Work Journal, 20*(4), 263+.

Gay, G. & Kirkland, K. (2003). Developing cultural critical consciousness and self-reflection in preservice teacher education. *Theory into Practice, 42*(3), 181-187.

GLBT youth in Iowa schools task force, (2006, January). *Findings and Recommendations.* Retrieved March 12, 2006, from www.iowasafeschools.org/FindingsRecommendations012006.pdf

GLSEN (Gay, Lesbian and Straight Education Network), (2005). The 2005 national school climate survey: The experiences of lesbian, gay, bisexual and transgender youth in our nation's schools. Retrieved August 5, 2006, from http://www.glsen.org.

Gullatt, D. (2006). Block scheduling: The effects on curriculum and student productivity. *National Association of Secondary School Principals. 90*(3). 250-266.

Gurin, P., Nagda, B. & Lopez, G. (2004). The benefits of diversity in education for democratic citizenship. *Journal of Social Issues, 60*(1), 17-34.

Heilman, E. (2004). Hoosiers, hicks, and hayseeds: The controversial place of marginalized ethnic whites in multicultural education. *Equity and Excellence in Education,* (37), 67-79.

Hill, N. & Taylor, L. (2004). Parental school involvement and children's academic achievement. *Current Directions in Psychological Science, 13*(4), 161+.

Imel, S. (1998). *Transformative learning in adulthood. ERIC Digest No. 200* (Report No. n/a). East Lansing, MI: National Center for Research on Teacher Learning. (ERIC Document Reproduction Service No. ED423426)

Iowa State University anti-discrimination policy. (n.d.). Retrieved December 8, 2005, from http://www.las.iastate.edu/diversity/definition.shtml.

Jenke, C., Lee, J. & Kanpol, B. (2001). Approaches to multicultural education in preservice teacher education: Philosophical frameworks and models for teaching. *The Urban Review, 33*(2), 87-105.

Johnson, L. (2002). "My eyes have been opened": White teachers and racial awareness. *Journal of Teacher Education, 53* (2), 153-167.

Kaplowiz, M., Hadlock, T. and Levine, R. (2004). A comparison of web and mail survey response rate. *Public Opinion Quarterly, 68*(1), 94-101.

Kim, B. (2001). Social constructivism. In M. Orey (ed.), *Emerging perspectives on learning, teaching, and technology.* Retrieved July 9, 2006, from http://www.coe.uga.edu/epltt/SocialConstructivism.htm.

Koppelman, K. (2005). Understanding human differences in *Multicultural education for a diverse America.* Boston: Pearson.

Le Roux, J. (2001). Effective schooling is being culturally responsive. *Intercultural Education, 12*(1), 41-50.

Marks, M. & Smrekar, J. (2003). A dialogue in diversity: Taking the first steps (Report No. n/a/). East Lansing, MI: National Center for Research on Teacher Learning. (ERIC Document Reproduction Service No. ED480848)

Marshall, P. (2001). Multicultural teaching concerns: New dimensions in the area of teacher concerns research? *The Journal of Educational Research, 89*(6). 371-379.

McAllister, G. & Irvine, J. (2002). The role of empathy in teaching culturally diverse students: A qualitative study of teachers' beliefs. *Journal of Teacher Education, 53*(5), 433-443.

McAlpine, L. (2004). Designing learning as well as teacher. *Active Learning in Higher Education, 5*(2), 119-134.

McBride, R., Xiang, P., Wittenburg, D. & Shen, J. (2002). An analysis of preservice teachers' dispositions toward critical thinking: a cross cultural perspective. *Asia-Pacific Journal of Teacher Education, 30*(2), 131-140.

McDonald, M. (2005). The integration of social justice in teacher education: Dimensions of prospective teachers' opportunities to learn. *Journal of Teacher Education, 56*(5), 418-435.

McGonigal, K. (2005). Teaching for transformation: From learning theory to teaching strategies. *Speaking of Teaching, 14*(2), 1-4.

McLure, J. (1997). Games and simulations: A modest proposal. *Science Activities, 34*(2), 3-4.

Meden, M. (1999). Classroom success stories: History comes alive in the classroom. *The Social Studies, 90*(5), 237-238.

Merriam, S. (2004). The role of cognitive development in Mezirow's transformational learning theory. *Adult Education Quarterly, 55*(1), 60-68.

Minor, L., Onwuegbuzie, A., Witcher, A. & James, T. (2002). Preservice teachers' educational beliefs and their perceptions of characteristics of effective teachers. *The Journal of Educational Research. 96*(2), 116-127).

Morrison, M., Lumby, J. & Sood, K. (2006). Diversity and diversity management. *Educational Management Administration and Leadership, 34*(3), 277-295.

National Center for Education Statistics, (2003a). Participation in education: Elementary/secondary education – family characteristics of 5 to 17 year-olds. Washington, DC. Retrieved on November 6, 2005, from http://nces.ed.gov/programs/coe/2003/section1/indicator02.asp

National Center for Education Statistics, (2003b). Participation in education: Elementary/secondary education – Concentration of enrollment by race/ethnicity and poverty. Washington, DC. Retrieved on November 6, 2005 from http://nces.ed.gov/fastfacts/display.asp?id=28

National Center for Education Statistics, (2003c). Teacher trends. Washington, DC. Retrieved on November 6, 2005, from http://nces.ed.gov/programs/coe/2004/section1/indicator05.asp

National Collaborative on Diversity in the Teaching Force, (2004), Assessment of diversity in America's teaching force: A call to action. Washington DC.

NEA (National Education Association), 2003. *Status of the American public school teacher 2000-2001: Highlights.* Washington, DC: Author.

Nelson, C. (2004). Reclaiming teacher preparation for success in high-needs schools. *Education, 124*(3), 475-480.

Nesbit, T. (2006). What's the matter with social class? *Adult Education Quarterly, 56*(3), 171-187.

North Central Regional Educational Laboratory, (2005a). *21st Century skills: Multicultural literacy* Retrieved June 27, 2005, from http://www.ncrel.org/sdrs/areas/issues/educatrs/presrvce/pe3lk6.htm.

North Central Regional Educational Laboratory, (2005b). *Educating teachers for diversity: Element 1.* Retrieved June 27, 2005, from http://www.ncrel.org/sdrs/areas/issues/educatrs/presrvce/pe3lk6.htm.

O'Connell, T. & Dyment, J. (2006). Reflections on using journals in higher education: A focus group discussion with family, *31*(6), 671-691.

Parsons, S., Brown, P. & Worley, V. (2004). A metaphor analysis of preservice teachers' reflective writings about diversity. *Curriculum and Teaching Dialogue, 6*(1), 49-58.

Price, J. & Valli, L. (2005). Preservice teachers becoming agents of change: Pedagogical implications for action research. *Journal of Teacher Education, 56*(1), 57-72.

Rao, S. (2005). Effective multicultural teacher education programs: Methodological and conceptual issues. *Education, 126*(2), 279-291.

Reese, S. (2005). An education in diversity. *Techniques: Connecting Education and Careers, 80*(8), 14-17.

Rice, M. (2003). Organizational culture, social equity and diversity: Teaching public administration education in the postmodern era. *Presented at the Special Symposium on The Social Equity Component of Public Affairs Education at the National Academy of Public Administration, Washington DC.*

Rodgers, C. (2006). "The turning of one's soul"—Learning to teach for social justice: The Putney Graduate School of Teacher Education (1950-1964). *Teachers College Record, 108*(7), 1266-1295.

Schulze, S. (2003). *Views on the combination of quantitative and qualitative research approaches.* Retrieved March 2, 2006, from University of South Africa Web site:

www.unisa.ac.za/contents/faculties/service_dept/bld/progressio/docs/schulze.pdf.

Sheets, R. (2005). *Diversity pedagogy: Examining the role of culture in the teaching-learning process.* Boston: Pearson.

Shields, C. (2002). A comparison study of student attitudes and perceptions in homogeneous and heterogeneous classrooms. *Roeper Review, 24*(3), 115+.

Shinagawa, L. (2005). Creating education institutions as centers of academic excellence, community, identity, and empowerment: The case for Asian Americans. *Asian American Policy Review, 14.* 39-52,

Shuaib, J. (2001). Vygotsky and the blues: Re-reading cultural connections and conceptual development. *Theory into Practice, 40*(3), n.p.

Simoni, J. et al. (1999). Teaching diversity: Experiences and recommendations of American Psychological Association. *Teaching of Psychology, 26*(2), 89-95.

Sisola, S. (2004). Learning as transformation: Critical perspectives on a theory in progress. *Journal of Physical Therapy Education, n.p.*

Skira, L., Scheurich, J., Garcia, J. and Nolly, G. (2004, February), Equity audits: A practical leadership tool for developing equitable and excellent schools. *Educational Administration Quarterly, 40*(1), 133-161.

Stephens, S. (2000). *Handbook for culturally responsive science curriculum.* Fairbanks, AK: Alaska Rural Systemic Initiative.

Summers, L. (2005, January 14). *Remarks at NBER conference on diversifying the science and engineering workforce.* Speech given at NBER Conference. Speech retrieved February 10, 2006, from http://www.president.harvard.edu/speeches/2005/nber.html.

Taylor, S. & Sobel, D. (2003) Rich contexts to emphasize social justice in teacher education: Curriculum and pedagogy in professional development schools. *Equity and Excellence in Education. 36*, 249-258.

Tsang, W. (2004). Teachers' personal practical knowledge and interactive decisions. *Language Teaching Research 8*(2). 163-198.

University of Oregon. Retrieved December 18, 2005 http://gladstone.uoregon.edu/~asuomca/diversityinit/definition.html.

Valle, J., Solis, S., Valpitta, D., & Connor, D. (2004). The disability closet:teachers with learning disabilities evaluate the risks and benefits of "coming out". *Equity and Education*, (37), 4-17,

VanHook, C. (2002). Preservice teachers' perceived barriers to implementation of multicultural curriculum. *Journal of Instructional Psychology, 29*(4), 254-264).

Vaughn, S. & Klingner, J. (1998). Students' perceptions of inclusion and resource room settings. *Journal of Special Education, 32*(2), 79-89.

Wasonga, T. & Piveral, J. (2004). Diversity and modeling of multicultural principles of education in a teacher education program. *Multicultural Perspectives, 6*(3), 42-47.

Watiuk, J. (2001). Queasy reader: When it comes to reading ability boys' brains work differently from girls'. *Today's Parent.* Retrieved February 10, 2006, from http://www.todaysparent.com/education/aboutreading/article.jsp?content=1704&page=1.

Watt, S. Howard-Hamilton, M., & Fairchild, E. (2003). An assessment of multicultural competence among residence advisors. *Journal of College and University Student Housing, 32*(2), 32-37.

Wisker, G. (2005). Daisies in the university meadow: Communities of practice and action research. Retrieved July 10, 2006, from http://www.conference.herdsa.org.au.

Zittleman, K. & Sadker, D. (2002). Gender bias in teacher education text: New (and old) lessons. *Journal of Teacher Education, 53*(2), 168-180.

Appendix

Survey of Diversity Issues Addressed in Teacher Education Courses

Survey of Diversity Issues Addressed in Teacher Education Courses

Thank you for agreeing to answer my survey on diversity training in teacher education courses. Please be honest as all answers will be anonymous. You may omit any questions or quit at anytime. Your participation in this survey constitutes your consent.

In order to be as clear as possible, I have included definitions for the following characteristics of difference:

Race - belonging to a group of humans who share the same physical features such as skin color

Ethnicity – a group that is socially distinguishable from another and has developed its own subculture (nationality, religion, and language)

Gender – socially constructed and culturally specific behavior and expectations assigned to roles (wife, husband, mother, etc.)

Sex - physiological and anatomical characteristics of maleness and femaleness with which a person is born

Age – the length of time a person has lived

Physical Abilities – what an individual is able to do with his or her physical body

Mental Abilities – an individual's academic ability

Sexual Orientation – the direction of somebody's sexual desire, toward people of the opposite sex or of the same sex or of both sexes

Education Level – parents' highest level of education

Language - that is the first language at home

Religion – people's beliefs and opinions concerning the existence, nature, and worship of a deity or deities, and divine involvement in the universe and human life.

Socio-Economic-Status – social ranking based on income, wealth, and/or status

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1) You are currently employed at which college/university below?

- ○ Iowa State University
- ○ Luther College
- ○ Drake University
- ○ Other

2) Please check the phases below that best describes your current teaching position.

- ○ Full Professor
- ○ Associate Professor
- ○ Assistant Professor
- ○ Visiting Professor
- ○ Instructor

3) Please indicate your years of teaching experience in higher education:

4) Are you tenured?

5) Please indicate your age:

6) Please indicate your sex:

- ○ Female
- ○ Male

7) Please indicate your race:

8) When teaching my teacher education classes, I include content about the following characteristics of difference.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Not Applicable
Race	○	○	○	○	○	○
Ethnicity	○	○	○	○	○	○
Gender	○	○	○	○	○	○
Sex	○	○	○	○	○	○
Age	○	○	○	○	○	○
Physical Abilities	○	○	○	○	○	○
Mental Abilities	○	○	○	○	○	○
Sexual Orientation	○	○	○	○	○	○
Educ Level	○	○	○	○	○	○
Language	○	○	○	○	○	○
Religion	○	○	○	○	○	○
Socio-Economic-Status	○	○	○	○	○	○

9) When I teach my teacher education classes, I address characteristics of difference in the following ways.

	Lecture	Whole Class Discussion	Small Group or Cooperative Group Discussion	Student Research presentations	In-Class Formal Activities	Games and Simulations	Journaling	Outside Assignments	Do N Addr Thi Issu
Race	☐	☐	☐	☐	☐	☐	☐	☐	☐
Ethnicity	☐	☐	☐	☐	☐	☐	☐	☐	☐
Gender	☐	☐	☐	☐	☐	☐	☐	☐	☐
Sex	☐	☐	☐	☐	☐	☐	☐	☐	☐
Age	☐	☐	☐	☐	☐	☐	☐	☐	☐
Physical Abilities	☐	☐	☐	☐	☐	☐	☐	☐	☐
Mental Abilities	☐	☐	☐	☐	☐	☐	☐	☐	☐
Sexual Orientation	☐	☐	☐	☐	☐	☐	☐	☐	☐
Educ Level	☐	☐	☐	☐	☐	☐	☐	☐	☐
Language	☐	☐	☐	☐	☐	☐	☐	☐	☐
Religion	☐	☐	☐	☐	☐	☐	☐	☐	☐
Socio-Economic-Status	☐	☐	☐	☐	☐	☐	☐	☐	☐

10) As a teacher education professor, I feel it is important that all future teachers learn about the following characteristics of difference in all teacher education courses.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Not Applicable
Race	○	○	○	○	○	○
Ethnicity	○	○	○	○	○	○
Gender	○	○	○	○	○	○
Sex	○	○	○	○	○	○
Age	○	○	○	○	○	○
Physical Abilities	○	○	○	○	○	○
Mental Abilities	○	○	○	○	○	○
Sexual Orientation	○	○	○	○	○	○
Educ Level	○	○	○	○	○	○
Language	○	○	○	○	○	○
Religion	○	○	○	○	○	○
Socio-Economic-Status	○	○	○	○	○	○

11) As a teacher education professor, I feel that I am well-prepared to teach about the following characteristics of difference.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Not Applicable
Race	○	○	○	○	○	○
Ethnicity	○	○	○	○	○	○
Gender	○	○	○	○	○	○
Sex	○	○	○	○	○	○
Age	○	○	○	○	○	○
Physical Abilities	○	○	○	○	○	○
Mental Abilities	○	○	○	○	○	○
Sexual Orientation	○	○	○	○	○	○
Educ Level	○	○	○	○	○	○
Language	○	○	○	○	○	○
Religion	○	○	○	○	○	○
Socio-Economic-Status	○	○	○	○	○	○

12) As a teacher education professor, I feel that I have been well-prepared to integrate the following characteristics of difference into instructional strategies, in-class activities, and outside assignments.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Not Applicable
Race	○	○	○	○	○	○
Ethnicity	○	○	○	○	○	○
Gender	○	○	○	○	○	○
Sex	○	○	○	○	○	○
Age	○	○	○	○	○	○
Physical Abilities	○	○	○	○	○	○
Mental Abilities	○	○	○	○	○	○
Sexual Orientation	○	○	○	○	○	○
Educ Level	○	○	○	○	○	○
Language	○	○	○	○	○	○
Religion	○	○	○	○	○	○
Socio-Economic-Status	○	○	○	○	○	○

13) As a teacher education professor, I feel that I consider students' previous perceptions when I plan instruction about the following characteristics of difference.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Not Applicable
Race	○	○	○	○	○	○
Ethnicity	○	○	○	○	○	○
Gender	○	○	○	○	○	○
Sex	○	○	○	○	○	○
Age	○	○	○	○	○	○
Physical Abilities	○	○	○	○	○	○
Mental Abilities	○	○	○	○	○	○
Sexual Orientation	○	○	○	○	○	○
Educ Level	○	○	○	○	○	○
Language	○	○	○	○	○	○
Religion	○	○	○	○	○	○
Socio-Economic-Status	○	○	○	○	○	○

14) As a teacher education professor, I feel that I help students assess their own professional dispositions about the following characteristics of difference.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Not Applicable
Race	○	○	○	○	○	○
Ethnicity	○	○	○	○	○	○
Gender	○	○	○	○	○	○
Sex	○	○	○	○	○	○
Age	○	○	○	○	○	○
Physical Abilities	○	○	○	○	○	○
Mental Abilities	○	○	○	○	○	○
Sexual Orientation	○	○	○	○	○	○
Educ Level	○	○	○	○	○	○
Language	○	○	○	○	○	○
Religion	○	○	○	○	○	○
Socio-Economic-Status	○	○	○	○	○	○

15) As a teacher education professor, I encourage the participation of all students in the discussion of the following characteristics of difference.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Not Applicable
Race	○	○	○	○	○	○
Ethnicity	○	○	○	○	○	○
Gender	○	○	○	○	○	○
Sex	○	○	○	○	○	○
Age	○	○	○	○	○	○
Physical Abilities	○	○	○	○	○	○
Mental Abilities	○	○	○	○	○	○
Sexual Orientation	○	○	○	○	○	○
Educ Level	○	○	○	○	○	○
Language	○	○	○	○	○	○
Religion	○	○	○	○	○	○
Socio-Economic-Status	○	○	○	○	○	○

16) As a teacher education professor, I consider my tenure status at my institution when planning to teach about or discuss the following characteristics of difference.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Not Applicable
Race	○	○	○	○	○	○
Ethnicity	○	○	○	○	○	○
Gender	○	○	○	○	○	○
Sex	○	○	○	○	○	○
Age	○	○	○	○	○	○
Physical Abilities	○	○	○	○	○	○
Mental Abilities	○	○	○	○	○	○
Sexual Orientation	○	○	○	○	○	○
Educ Level	○	○	○	○	○	○
Language	○	○	○	○	○	○
Religion	○	○	○	○	○	○
Socio-Economic-Status	○	○	○	○	○	○

17) As a teacher education professor, I feel that I consider the institution's mission and vision when I plan instruction about the following characteristics of difference.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Not Applicable

Race	○	○	○	○	○	○
Ethnicity	○	○	○	○	○	○
Gender	○	○	○	○	○	○
Sex	○	○	○	○	○	○
Age	○	○	○	○	○	○
Physical Abilities	○	○	○	○	○	○
Mental Abilities	○	○	○	○	○	○
Sexual Orientation	○	○	○	○	○	○
Educ Level	○	○	○	○	○	○
Language	○	○	○	○	○	○
Religion	○	○	○	○	○	○
Socio-Economic-Status	○	○	○	○	○	○

18) How do you manage a student who rejects the acceptance of all students regardless of their characteristics of difference?

19) What types of professional development have you engaged in to increase your knowledge about characteristics of difference?

20) Would you like to offer any further comments?

Thank you for taking the time to answer the survey.

Submit Survey (1 of 1)

Appendix

IRB (Institutional Review Board) Application

IRB (Institutional Review Board) Study Proposal

IRB (Institutional Review Board) Letter

IRB Number _____

Drake University Institutional Review Board

2507 University Avenue, Des Moines, IA 50311-4505•Phone: 515-271-2750
E-mail: ron.torry@drake.edu

Application for

Determination of Exempt Status

1. **Preliminary Information**—Answer the following two questions about your proposed project to determine if you need to submit this Application for Determination of Exempt Status.

   a. Is the proposed activity research? ☑ Yes ☐ No

   Research is a systematic investigation that includes 1) research development, 2) testing, and 3) evaluation and is intended to develop or contribute to generalizable knowledge.

   If YES, proceed to the next question. If NO, IRB review is not required and you do not need to complete this form.

   b. Does the proposed research involve human subjects? ☑ Yes ☐ No

   "Human subject" is a "living individual about whom an investigator (whether professional or student) conducting research obtains 1) data through intervention or interaction with the individual, or 2) identifiable private information" (for example, information gathered through surveys or questionnaires).

   If YES, proceed with the form. If NO, IRB review is not required and you do not need to complete this form.

   If you answered yes to both questions above and you believe the project qualifies for exempt status [45 CFR 46.101(b)], you must complete this form and submit it (electronically and hard-copy) to the IRB for official determination of exempt status. No work with human subjects can be initiated on the proposed project until you receive a written response from the IRB confirming the exempt status of your project.

2. **Contact and Study Information** Date of report: 2/20/2006

   Study Title: The Challenge Within: Diversity Training in Teacher Education

   Principal Investigator: Heather Ludwig

   Phone: 515.382.4884

   Department and School: School of Education - Doctoral Program

   All other study personnel (please indicate staff or student):

   _____ Staff ☐ Student ☐
   _____ Staff ☐ Student ☐
   _____ Staff ☐ Student ☐
   _____ Staff ☐ Student ☐
   _____ Staff ☐ Student ☐
   _____

   Please list any additional study personnel on last page of application.

3. **Eligibility for Exempt Status Review**

   a. Does the proposed activity involve children (anyone under 18 years of age) as research subjects? No

   If YES, the proposed activity must be submitted to the IRB for either Expedited Review or Full Board Review UNLESS the research involves only observation of public behavior when the investigators do not participate in the activities being observed. If NO, proceed to the next question.

   b..Does the proposed activity involve either of the following groups as research subjects:

   - Pregnant women, fetuses, or human in-vitro fertilization ☐ Yes ☑ No
   - Prisoners ☐ Yes ☑ No

   If YES to either of the above, the proposed activity must be submitted to the IRB for either Expedited Review or Full Board Review. If NO to both of the above, proceed to the next question.

   c. If the proposed activity is funded by a federal department or agency, does the federal department or agency require IRB determination of exempt status? ☐ Yes ☑ No

4. **Exempt Category**—Identify the exempt category (or categories) of the proposed research:

   ☑ a. Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

   ☐ b. Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior UNLESS: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

   NOTE: This exemption DOES NOT apply to anyone under 18, unless it is research involving observation of public behavior when the investigators do not participate in the activities being observed.

   ☐ c. Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph B above, if: (i) the human subjects are elected or appointed public officials or candidates for public office; or (ii) Federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.

☐ d. Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

☐ e. Research and demonstration projects which are conducted by or subject to the approval of Federal Department or Agency heads, and which are designed to study, evaluate or otherwise examine: (i) Public benefit or service programs; (ii) Procedures for obtaining benefits or services under those programs; (iii) Possible changes in or alternatives to those programs or procedures; or (iv) Possible changes in methods or levels of payment for benefits or services under those programs.

☐ f. Taste and food quality evaluation and consumer acceptance studies if: (i) wholesome foods without additives are consumed; or (ii) a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture.

5. **Submission Requirements**—Submit the original and one copy of the following documents, as applicable:

☑ Completed Application for Determination of Exempt Status
☑ Protocol or study design
☑ Questionnaires/surveys
☐ Interview questions
☐ Other (explain): _____

6. **Principal Investigator's Assurance**

The following signature certifies that the Principal Investigator (PI) understands and accepts the following obligations to protect the rights of research subjects. It is the PI's responsibility to:

a. **Ensure that the submitted protocol provides a complete description of the proposed research (contains adequate information regarding subjects' rights and welfare and ensures that all applicable laws and regulations will be followed).**

b. **Ensure that, throughout the course of the study, all research personnel involved in the project conform to the applicable federal regulations and Drake University IRB policies when conducting the research.**

c. **Secure all research-related records on file and acknowledge that the IRB may review these records at any time.**

d. **Promptly report any proposed changes to the research project (e.g., amendments, modifications, updates) to the IRB. Changes will not be initiated until such changes have been reviewed and approved by the IRB, except to eliminate immediate hazards to subjects.**

e. **Inform the IRB immediately of any information that may negatively influence the risk/benefit ratio of subjects enrolled in the study.**

I understand that failure to comply with applicable federal regulations and Drake University IRB policies and procedures could result in suspension or termination of the research project.

Heather Lederer
Signature of Principal Investigator

2/10/06
Date

7. **All Other Study Personnel (please indicate staff or student)**

______	☐ Staff	☐ Student
______	☐ Staff	☐ Student
______	☐ Staff	☐ Student
______	☐ Staff	☐ Student
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______	☐ Staff	☐ Student
______	☐ Staff	☐ Student
______	☐ Staff	☐ Student

Introduction
Heather Ludwig

In today's world, it is critical to provide teachers with the diversity skills and attitudes that will allow all students to grow as well as to learn. Educators must be able to relate and teach a wide range of individuals so that in both the ideal and real classroom no child is left behind. Without diversity training, however, most teachers teach the way they were taught and relate best to individuals similar to themselves because of their comfort level. Yet, public school environments today seldom reflect a uniform white, middle-class, comfortable America. While 40% of 4th graders are eligible for free and reduced lunches (National Center for Education Statistics, 2003), 42% were part of a racial or ethnic minority group in 1999, up from 22% in 1972 (National Center for Education Statistics, 2003). In addition, Marks & Smrekar (2003) state that the number of students of color "is rising with 34% in 1994 and will reach 40% or more by 2010" (p. 4). Diversity is, therefore, a critical issue that must be handled within classroom situations.

While public school classrooms are becoming more diverse, the teachers in those classrooms reflect a relatively homogeneous population. According to Cruz & Patterson (2005), in 1999, 87% of elementary and secondary school teachers were Caucasian, female, and from the middle socioeconomic class, while the National Collaborative on Diversity in Teaching force and National Education Association (NEA) found in 2001, 90% of public teachers were White

and only 6% were Black. The NEA (2003) established that 79% of teachers surveyed were female. The National Collaborative on Diversity in the Teaching Force found 40% of schools had no teachers of color and this is not representative to the student population. A possible conflict arises among teachers and students in these classrooms because of difficulty understanding and communicating when teacher and students come from different backgrounds.

Ference, & Bell, (2004) discuss the necessary elements of a teacher preparation program that will address these issues. The majority of teachers are coming from white, middle-class backgrounds with limited association with other cultures and languages (Ference, & Bell, 2004). "Curriculum needs to reformed with inclusion of curriculum theory and historical inquiry so that bias in textbooks, media, and other educational materials can be detected easily by educators, students, and other stakeholders" (Ameny-Dixon, 2004, p. 5). Teacher education needs to be supportive of an ever-changing society so that teacher's values are not placed as the "right" values, and students are not judged by the teacher's values. This concept must be taught and reinforced in pre service teacher education programs.

Purpose of the Study

The purpose of this study is twofold: to identify what characteristics of difference are addressed in teacher education classroom across three teacher

education programs in the Midwest, and how teacher education faculty incorporate the characteristics of difference into instructional strategies, formal in-class activities, or outside classroom assignments.

Research Questions

1. What characteristics of difference do teacher education faculty identify and address in their teacher education coursework?
2. What types of instructional strategies, formal in class activities, or outside assignments are used in pre-service teacher education classrooms to address particular characteristics of difference.

Procedures

1. Population: The sample is a convenience sample of teacher education faculty at three Midwestern College/Universities.
2. Study Design: A descriptive design has been chosen to identify what characteristics of difference are addressed in teacher education classrooms and how teacher education faculty incorporate the characteristics of difference into instructional strategies, formal in-class activities, or outside classroom assignments.
3. Instrument: Participants will complete an electronic survey with a Likert Scale or forced choice.
4. Timeline:

a. Survey to distributed Spring 2006
b. Data collected and entered into Excel (Summer 2006)
c. Study tested for statistical significance
d. Results will be included in a dissertation and published in Dissertation Abstracts.
e. Results will be available to study participants who request them and institutions that support the research study.

Cost-Benefit Analysis

There is no risk to the participants because this is a self-reported survey. Teacher education faculty are not required to participate and may omit any questions. Responses will be anonymous, collected electronically, disaggregated by demographics only. With the electronic survey hosted in WebSurveyor, response can be tracked automatically for participation purposes only. The software will send automatic reminders but survey remains anonymous.

Institutions who participate in the study will find programmatic information beneficial. The information will also be useful to the profession. Ludwig expects no financial gain, but professional development and degree completion will be beneficial to the investigator.

References

Ameny-Dixon, G. (2004). Why multicultural education is more important in higher education now than ever: A global perspective. *International Journal of Scholarly Academic Intellectual Diversity. 8*(1), N.A.

Cruz, B. & Patterson, J., (2005). Cross-cultural simulations in teacher education: Developing empathy and understanding. *Multicultural Perspectives. 7*(2), 40-47.

Ference, R. & Bell, S. (2004) A cross-cultural immersion in the U.S.: Changing preservice teacher attitudes toward Latino ESOL students. *Equity & Excellence in Education. 37*, 343+350.

Marks, M., & Smrekar, J. (2003). A dialogue in diversity: Taking the first steps (Report No. n/a/). East Lansing, MI: National Center for Research on Teacher Learning. (ERIC Document Reproduction Service No. ED480848)

National Center for Education Statistics (2003). Participation in education: Elementary/secondary education – family characteristics of 5 to 17 year-olds. Washington, DC. Retrieved on November 6, 2005 from http://nces.ed.gov/programs/coe/2003/section1/indicator02.asp

--- (2003). Participation in education: Elementary/secondary education – Concentration of enrollment by race/ethnicity and poverty. Washington, DC. Retrieved on November 6, 2005 from http://nces.ed.gov/fastfacts/display.asp?id=28

--- (2003). Teacher trends. Washington, DC. Retrieved on November 6, 2005 from http://nces.ed.gov/programs/coe/2004/section1/indicator05.asp

--- (2005). The condition of education 2005: Indicator 4. Washington, DC.

National Collaborative on Diversity in the Teaching Force (2004) Assessment of diversity in America's teaching force: A call to action. Washington DC.

National Education Association (2003) Status of the American public school teacher 2000-2001: Highlights. Retrieved December 20, 2005 from http://www.nea.org

Drake University Institutional Review Board
2507 University Avenue, Des Moines, IA 50311-4505 Phone: 515-271-3795
E-mail: michael.rieck@drake.edu

March 6, 2006

Ms. Heather Ludwig
1120 12th Street
Nevada, Iowa 50201

Re: IRB2005-06052 Proposal

Dear Ms. Ludwig:

The IRB has approved your proposal titled "The Challenge Within: Diversity Training in Teacher Education." This approval is for the time period from March 6, 2006 until March 6, 2007. We are assigning the number IRB2005-06052 to your proposal, and ask that you use this number in any future communications concerning this proposal. Please feel free to contact me if you have any questions.

Sincerely,

Michael Rieck
Drake IRB Chair

Appendix

Initial Electronic Letter to Deans and Department Heads

October 20, 2006

Dear School of Education Dean,

I am a doctoral candidate from Drake University and currently I am teaching at Nevada High School, Nevada, IA. I am requesting your help in gathering information, through an electronic survey, about diversity training in pre-service teacher education courses.

In today's world, it is critical to provide teachers with the diversity skills and attitudes that will allow all students to grow as well as to learn. Educators must be able to relate and teach a wide range of individuals so that in both the ideal and real classroom no child is left behind. Because teacher education courses are a vital part of preparing future teachers for a diverse world, I am asking you to encourage your faculty to participate in this survey. If you wish to view the survey, please visit https://websurveyor.net/wsb.dll/40731/diversityauditfinal.htm. The survey will be live for participants to respond to from April 7 to April 30, 2006.

The purpose of this study is twofold: to identify what characteristics of difference are addressed in teacher education classroom across three teacher education programs in the Midwest, and how teacher education faculty incorporate the characteristics of difference into instructional strategies, formal in-class activities, or outside classroom assignments. Each institution will be referred by number only. Your institution may be interested in the data from this survey as a diversity artifact for accreditation.

There is no risk to the participants because this is a self-reported survey. Teacher education faculty members are not required to participate and may omit any questions. Responses will be anonymous, collected electronically, disaggregated by demographics only. With the electronic survey hosted in WebSurveyor, response can be tracked automatically for participation purposes only. The software will send automatic reminders but the survey remains anonymous.

To participate in this survey please electronically send me all full-time teacher education faculty's emails and send a memo to promote their participation. If you have any questions or would like a copy of the aggregated results and disaggregated results of your institution only, please contact Heather Ludwig at heather.ludwig@drake.edu or 515.382.4884.

Sincerely,

Heather Ludwig, MSE
Doctoral Candidate, Drake University School of Education

Appendix

Initial Electronic Mail to Teacher Education Faculty Members at Three Institutions

February 18, 2006

Dear Faculty Member,

In today's world, it is critical to provide teachers with the diversity skills and attitudes that will allow all students to grow as well as to learn. Educators must be able to relate and teach a wide range of individuals so that in both the ideal and real classroom no child is left behind. Because teacher education courses are a vital part of preparing future teachers for a diverse world, I am asking you as teacher education faculty to answer a short survey about diversity practices within your teacher education program. Please take a few minutes to fill out the electronic survey at the following Web site: https://websurveyor.net/wsb.dll/40731/diversityauditfinal.htm. Completing the survey constitutes your consent to be a part of this study.

The purpose of this study is twofold: to identify what characteristics of difference are addressed in teacher education classroom across three teacher education programs in the Midwest, and how teacher education faculty incorporate the characteristics of difference into instructional strategies, formal in-class activities, or outside classroom assignments.

There is no risk to the participants because this is a self-reported survey. Teacher education faculty are not required to participate and may omit any questions. Responses will be anonymous, collected electronically, disaggregated by demographics only. With the electronic survey hosted in WebSurveyor, response can be tracked automatically for participation purposes only. The software will send automatic reminders but survey remains anonymous.

If you have any questions or would like a copy of the results, please contact Heather Ludwig at heather.ludwig@drake.edu or 515.382.4884.

Sincerely,

Heather Ludwig, MSE

Appendix

Second Electronic Mail with Electronic Survey Link

Dear Teacher Education Faculty Members,

If you have already completed the Diversity Issues Addressed in Teacher Education Survey, thank you for your contribution to this research project.

If you have not yet completed the survey, I would like to invite you to do so at your earliest convenience. Your contribution to this project is valued and will assist in adding to the knowledge about diversity issues in Teacher Education Courses.

The purpose of this study is twofold: to identify what characteristics of difference are addressed in teacher education classroom across three teacher education programs in the Midwest, and how teacher education faculty incorporate the characteristics of difference into instructional strategies, formal in-class activities, or outside classroom assignments.

Your answers will remain anonymous and you may elect to withdraw from the study at any time. I hope you will choose to participate. The survey will be available to you until May 15, 2006.

https://websurveyor.net/wsb.dll/40731/diversityauditfinal.htm

Again, thank you so much for your time.

Heather Ludwig
Doctoral Candidate
Drake University